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## MONTHLY MAGAZINE.

JULY, 1880.

ALREADY WE ARE in receipt of the premium lists of a few County, District and State Agricultural Societies, and these remind us of some things that we designed to say before the time of our autumn fairs. Long years since, when we first took an active part in conducting Agricultural and Horticultural Shows, they were the farmers' only summer holidays. On the Fourth of July, haying was in progress, thunder showers about and feared, and harvest about commencing, so the boys could not be spared, at most only an hour or two earlier than usual, just for a run to the village, or a call on the young ladies that lived a few miles away over the hill, where they were anxious to go and see a new horse the old gentleman had purchased, or an improved plow, both of which were forgotten until mother inquired rather roguishly, next day, the color of the new horse.

To the county fair all looked forward with a great deal of pleasure, for it was to be a jolly time; not for an hour or two, or half a day, but for two whole days, at least. The heavy work for the year was then over; the wheat land was ready for the grain, if not already sown, but the time was usually so arranged as to bring the annual holiday after wheat sowing, so that the farmer and his family and hired help could enjoy a few days of leisure without feeling that anything was neglected or suffering, but rather with that complacent, comfortable assurance

that by a season of successful toil they had earned a holiday and rest.

To these fairs the men carried the best stock in the town, or county, or State, and the choicest fruits and vegetables, while the ladies made a gay display of quilts and rag carpets, and needlework, and bread and butter and cheese, which made no small part of the exhibition. In addition to these, the manufacturers of plows and threshing machines, and corn shellers and strawcutters, displayed their wares in motion, in one corner of the field, and kept up a continual clatter—much to the amusement of the boys.

This was the old-fashioned fair to which the farmers and their wives and the small boys and girls hastened in the farm wagon, or the Sunday democrat, the larger boys and girls choosing their own company, if they had a fair chance. The day was spent pleasantly in visiting with friends and neighbors, seeing and discussing the merits of the wonderful things on exhibition, eating Water Melons and drinking sweet cider, the two latter not being included in the ticket of admission, but sold at a moderate price by some embryo merchant of the neighborhood, and poor or penurious must have been the one who could refuse to invest a few pennies for such luxuries at fair time. Occasionally, however, the bill of fare was varied by a more luxurious entertainment, and Peanuts and colored lemonade, which always claimed



the special attention and captured the purse of the young people.

Things, however, have been changing for the last quarter of a century, and these changes have seriously affected the character of our annual fairs. The hardest of our farm work is now done by machinery. The sickle was driven from the harvest field by the cradle, and this held its triumph but a little while, and retreated ingloriously before the reaper. Scythes were turned into pruning hooks long before the swords, a transformation for which good men have been looking and longing in vain. The young ladies of the farm no longer boast of the number of pieces contained in the quilts they last pieced, but present to their admirers evidence of art in painted crockery; it is no longer blue dogs and yellow lions worked in worsted and silk, that hang in the best room, but a diploma from the academy or high school. The boys no longer brag much about breaking steers, but talk wisely, if not understandingly, of chemistry and evolution, and trade and roadsters. Railroads have opened up the country, so that a famed glen, or waterfall, or some other wonder of nature, is reached by excursion trains as easily and cheaply as formerly the county fair. The old fair ground is, therefore, deserted by the young, and the old are passing away; the attendance is small, the receipts meagre, and the officers are embarrassed and find it difficult to pay premiums and meet other expenses. To attract the crowd, the managers allow exhibitions of doubtful character, and the poorest kind of gambling, to the disgust of many of the best friends of the association, while the object sought, money, is seldom secured. The result is, that many State and County associations are financially embarrassed, and are at a loss to know what means to take to pay off old debts and meet current expenses. The only safe plan, we think, is to secure an exhibition of the highest possible merit, and rely upon the intelligence of the people for its support. The old days are gone, never to return, and it is wise to admit the fact, conform to the altered circumstances, and meet the requirements of the time. As a rule, it will be found that the most meritorious exhibitions secure the best support. Some of the annual expositions like that of Cincinnati are marvels of success. If all clap-trap and weak desires to draw a thoughtless crowd are abandoned, and efforts are made in an energetic and business-like way to make meritorious displays, our annual fairs may yet have a more successful and honorable career than ever, and prove of inestimable value as instructors of the people.

There are evils incidental to large crowds

which no efforts of the managers can wholly overcome, and the management are only responsible for those which they encourage, even if they do not approve. Where officers, however, permit disgusting side-shows and gambling under various specious forms and deceptive names, they are responsible for the evils which invariably flow from these causes. If prizes are offered for fast trotting or running, the society is responsible for the ever-attendant betting, even though they may baptize their race a "Trial of Speed," or give it any other fancy and deceptive name. It is well to improve our fowls and sheep and horses, and plows and harrows and wagons, but there is no improvement so much needed, none so important to the welfare and glory of our country, as the improvement of boys and girls and men and women. And, no matter what a society may do for the improvement of animals and implements and grain, if it depraves the people it is a curse and not a blessing.

### USE THE FLOWERS.

It's a trite and homely saying, "You can't eat your cake and keep it too," and we are obliged to square our actions with it pretty closely; but there is one peculiar satisfaction in the cultivation of flowers, for, in a certain sense, they are an exception to the practical operations of the rules of addition and subtraction, as embodied in the expression of them in the old and popular axiom above quoted. During the growing and blooming season of many of the best bedding plants and annuals the flowers can be cut freely and used, and the oftener they are removed the greater the amount of bloom. When plants are allowed to perfect seeds, they soon cease to produce more flowers, as the whole strength of the plant is necessary to mature the seeds. Therefore, if you want flowers, cut them and use them; place them on your tables, give them to your friends, and remember those that are sick, and perhaps, too, you may use them to help some one who is disheartened, or even to lift up a degraded one who needs, above all else, your sympathy. It would be sad indeed if objects so beautiful as flowers should be the occasion of growing selfishness. Give them with a liberal hand and He who sends the sunshine and the rain will bless you with increasing blossoms. A gift of flowers can seldom be inappropriate, either to young or old, and purity and goodness are painted on every petal. With the gift

"Our hearts are lighter for its sake,  
Our fancy's age renews its youth,  
And dim-remembered fictions take  
The guise of present truth."



## AUTUMN BERRIES.

The changes of the seasons are always full of interest, each affording us its benediction as it does its care; nor would we, if we could, have it otherwise. Only in imagination would we seek for a home where

“—Everlasting spring abides  
And never-withering flowers.”

The warm breath of spring, the glowing heat of summer, the chill winds and frosts of autumn, and the storms and blasts of winter, bear with them sensations of pleasure, or perhaps of pain, that add to the zest of existence.

“Rich gift of God! A year of time!  
What pomp of rise and shut of day,  
What hues wherewith our northern clime  
Makes autumn's dropping woodlands gay.

What airs outblown from ferny dells,  
And Clover-bloom, and Sweet Briar smells,  
What songs of brooks and birds, what fruits and flowers,  
Green woods and moonlit snows, have in its round been ours.”

The sources of pleasure and satisfaction, to those who are admirers of nature, are afforded in endless variety. Our gardens and our lawns, the roadsides, the fields and the forests that in spring and summer speak of hope and joy in buds and blossoms, in autumn present us with the fulness and wealth of glorious life, the fruits of a completed existence and the pledges of perpetuity. We have gathered for our friends and present them this month a handful of berries found on tree and shrub and clambering vine. Purposely omitting that royal fruit that gladdened

“—The homeward-turning Jew,  
When Eschol's clusters on his shoulders lay,”

we offer only those that awaken in us pleasure through the sense of sight and not of taste.

In this bouquet are found only a few, though some of the finest and most showy autumn fruits of hardy native and introduced plants that thrive in all sections of the country. At the left side of the plate, top and bottom, numbered 1 and 6, are two kinds that are particularly showy and sufficiently resemble each other to suggest the idea of that close relationship that really exists between them, for they are members of the same natural family. Number 1 is *Celastrus scandens*, or Staff-tree, a native, twining vine, sometimes called Wax-work, and Climbing Bitter-Sweet. This is an excellent climbing vine to cover large spaces, and its bright scarlet seeds in their orange-colored coverings hang on and light up its branches long after its leaves have fallen,

“And until winter comes,  
Who snows his soft white sleep and silence over all.”  
The *Euonymus*, number 6, is what is commonly known as the Burning Bush, and forms a tree

sometimes thirty feet high, although it is seldom seen in this section over twelve or fifteen feet; we refer to *E. Europæus*. *E. Americanus*, a native of our woods, only grows from two to five feet. *E. atropurpureus*, another native species, grows from five to ten feet high, but neither of the latter are often introduced into cultivation. All of them have showy fruit and, like the Climbing Bitter-Sweet, are beautiful when nature has put on her sombre aspect. Number 3 is the fruit of the Black Alder, *Prinos verticillatus*, or *Ilex verticillatus*, as it is variously designated. It is a native woodland, upright growing shrub, about eight feet high. The bright scarlet berries cling to the naked twigs all winter.

“O'er yon low wall, which guards our unkempt zone,  
Where vines and weeds and Scrub Oaks intertwine,  
Safe from the plow, whose rough discordant stone  
Is mossed to one soft gray by Lichens fine,  
The tangled Blackberry, crossed and recrossed weaves  
A prickly net-work of ensanguined leaves;  
Hard by, with coral beads, the prim Black Alders  
shine.”

The purple berries on the reddish stems of the Virginia Creeper, number 3, are very pretty and are produced in great profusion, but they fall so quickly that little use can be made of them when cut for ornament.

In the Barberry, *Berberis vulgaris*, we have a fruit useful as well as ornamental, for its extreme acidity makes it valuable for jellies and tarts. Its beautiful drooping clusters of late-hanging fruit, and its profusion of bright yellow flowers in the spring, are attractive qualities in it as a cultivated shrub. Our native species, *B. Canadensis*, grows larger, but has fewer flowers than the one just described. There are species and varieties with bluish-black and violet-colored fruit, and also a purple-leaved variety that is a very handsome shrub.

The little Apple-like fruit at the bottom, number 5, is easily recognized as that of a Thorn. This one is *Crataegus lucida odorata*. There are many species and varieties of the Thorn in cultivation that are desirable on account of their handsome growth and the beauty of the foliage, flowers and fruit; bright, glossy leaves, and fragrant flowers, and the pretty, blackish-red fruit distinguish this one.

The small white berries in the compact cluster are the fruits of a native species of Dogwood, *Cornus stolonifera*. This shrub is sometimes called Red Osier, and Red-twigged Dogwood, on account of its red bark, a feature it has in common with the European species, *C. sanguinea*, and which make it very conspicuous



in the absence of its foliage in the winter. Both this and *C. sanguinea* are employed as ornamental shrubs.

The American Holly, *Ilex opaca*, number 7, is distinguished by its peculiar foliage. Residents of our eastern coast know the beauty of this plant during the Christmas holidays, when its handsome glossy leaves and bright scarlet berries light up the homes and the churches with an aspect of beauty and life strongly in contrast with the snow and ice outside. West of the Atlantic States it is seldom found.

The few large, white berries will be known as old acquaintances to most of our readers, being the Snowberry, *Symphoricarpos racemosus*, one of our native shrubs that has long been in our gardens and shrubberies. In making a considerable plantation of shrubs, one should bear in mind this feature of their fruits presented in autumn and early winter, even as we select late blooming plants to brighten the garden at the close of the year.

"Along the river's summer walk  
The withered tufts of Asters nod,  
And trembles on its arid stalk  
The hoar-plume of the Golden-rod.  
And on a ground of sombre Fir,  
And azure-studded Juniper,  
The Silver Birch its buds of purple shows,  
And scarlet berries tell where bloomed the sweet wild  
rose."

### A NEW CLASS OF ROSES.

It is with unfeigned satisfaction that the progress of Rose cultivation is noted. The excellent monograph on American Roses prepared and read by H. B. ELLWANGER before the Western New York Horticultural Society the past winter, and from which notes were made in our March number, gives in detail an account of all the valuable contributions of new Roses that have been given to the public by our own cultivators. In that paper Mr. ELLWANGER expressed a well-founded conviction that we shall yet "succeed in obtaining a new class of hardy climbers which shall, in a great measure, combine the good qualities of the Hybrid Perpetual, Noisette, and Prairie Roses." This desire we have no doubt will be fulfilled, and our once-blooming and scentless, although handsome, climbers will be replaced by those that will be more or less continuous in bloom, and at the same time possess fragrance, that crowning grace to all their other good qualities. This is the more confidently to be expected from the fact that within a few years a class of Roses called Hybrid Noisette has been produced in France by the crossing of Hybrid Perpetuals and Noisettes. The plants of this class partake of the vigor and hardiness of Hybrid Perpetuals

on one side, and of the continuous blooming character of the Noisettes on the other. Good examples of this class are *Boule de Neige*, *Coquette des Alpes*, *La France*, and *Madame Alfred de Rougement*. If such splendid specimens are possible by judicious crossing, certainly we may be allowed to indulge the hope of some valuable productions by hybridizing with our native climbing varieties.

But we wish now to notice another advance, and that is the production in England of another new class of Roses, called Hybrid Teas. One of the Tea Roses originated in this country is *President*, which is described as large, moderately full, of good form, and very fragrant; in color it is rose, shaded with salmon. Now, it appears, this Rose has been playing a very important part in the hands of Mr. BENNETT, of Stapleford, England; by crossing this variety principally, but also some others, with different varieties of Hybrid Perpetuals, Mr. BENNETT has raised a dozen varieties called, very properly, Hybrid Teas. An appreciative horticulturist who has seen these varieties says: "Few, indeed, have been our home-born Roses; and for one person to be capable of distributing nine first-class English seedlings in one year is indeed a feat worthy of record. He has given us faithfully the names of the parents of each kind, and I feel quite sure that all who have seen them in growth and in bloom will have detected how closely the progeny resembles in some special feature either or both of their parents." In speaking of representing them by paintings, he says: "Some of the colors and shadings are so exquisite and unique, that it must be an impossibility to transfer them to paper." And again, "For pot culture, either for home decoration or for market, these Roses will be invaluable. They are elegant in habit, hardy in constitution, most of them deliciously scented, perpetual, and abundant bloomers." The following descriptions of some of them will convey an idea of the results attained in this new class.

Beauty of Stapleford is the produce of seed from *Alba Rosea* crossed with *Comtesse d'Oxford*; color very distinct and beautiful, center deep, rich rose, gradually shading off to a pale pink in the outer petals; petals very large and perfectly arranged, not scented, but a most profuse bloomer.

Duke of Connaught is a seedling from *President* crossed by *Louis Van Houtte*; deep, rich, velvety crimson center, the outer petals deep, brilliant red, exceedingly large and long in the bud, also, when fully developed, very full and fine form, and of great substance—foliage ample and very perfect.



Duchess of Connaught is a seedling from President crossed by Duchess de Vallambrosa; a delicate silvery rose, with bright salmon center; most distinct in foliage and blooms; very finely formed, large and highly scented.

Duchess of Westminster is a seedling from President crossed with Marquise de Castellane; flowers exceedingly large, without the least coarseness, of very fine form, color bright cerise.

Honorable George Bancroft, is a seedling from Madame de St. Joseph crossed with Lord Macaulay; flowers very large, of the form of Lord Macaulay, bright rosy crimson, shaded with purple.

Jean Sisley is a seedling from President crossed with Emelie Hausburg; flowers very large, full of petal and of the finest form, never showing the eye; color, outside petal rosy lilac, center bright pink; a flower of great substance that remains in perfection a long time.

Michael Saunders is a seedling from President crossed with Madame Victor Verdier; very large flowers, of the finest form, very full of petals, which are beautifully reflexed, color a bronzy pink; very sweet scented.

Nancy Lee is a seedling from Alba Rosea crossed by Edward Morren; color a bright salmon rose, buds long and full, very free flowering and sweet scented.

Pearl is a seedling from President crossed by Comtesse de Serenyi. It is a delicate blush-white, medium-sized, perfect in shape, and exceedingly chaste and beautiful, and delicately scented.

## PROTECTION FOR PEACH TREES.

The MURRAY BROTHERS, of Elm Grove, Mo., last year manufactured and patented an apparatus for baling or thatching Peach trees with straw, as a means of protecting them from the severities of the climate in winter. Their experiments with the trees baled in straw had fully satisfied them of that mode of shielding them from cold and storm, and this invention affords the means of doing the work quickly and economically. The working of the machine is said to be simple, and consists of drawing the top of the tree into a compact cone shape, and thatching with straw, canvas, or other material, making a complete protection against ice, frost, severe cold and sudden changes. It also secures the tree from breaking from sleet, and prevents the wood from browning and casting its fruit in the spring, thus securing abundant crops of superior fruit. It will also protect the fruit bloom from killing, in the east, with white spring frosts; first, by holding the bloom back several days; second, by leaving the thatching on until

quite late in the spring. It is said that two men can bale from forty to one hundred trees a day, according to the sizes of the trees. In a letter just received from them they say: "In regard to our own experience in baling Peach trees in our orchards, the present crop is very satisfactory. In order to make a fair test, we baled a portion of each variety, leaving a number of each kind in the same row not baled, and the result is that a number of varieties, such as George the Fourth, Grosse Mignon, Troth's Early, Heath Cling, Smock Free, &c., there are no Peaches on those not baled worth mentioning. We can count from two to twelve Peaches each on large trees ten years planted, while those baled have a full crop, and will run from three to eight crates each tree. Some of the native seedling trees, and some budded varieties, such as Hale's Early and Amsden, have a fair crop where not baled, but those baled are the best, even of these varieties. Our crop was killed by a sleet early in the spring, which, of course could not hurt those baled. We have no doubt but you can raise abundant crops in your State every year by baling."

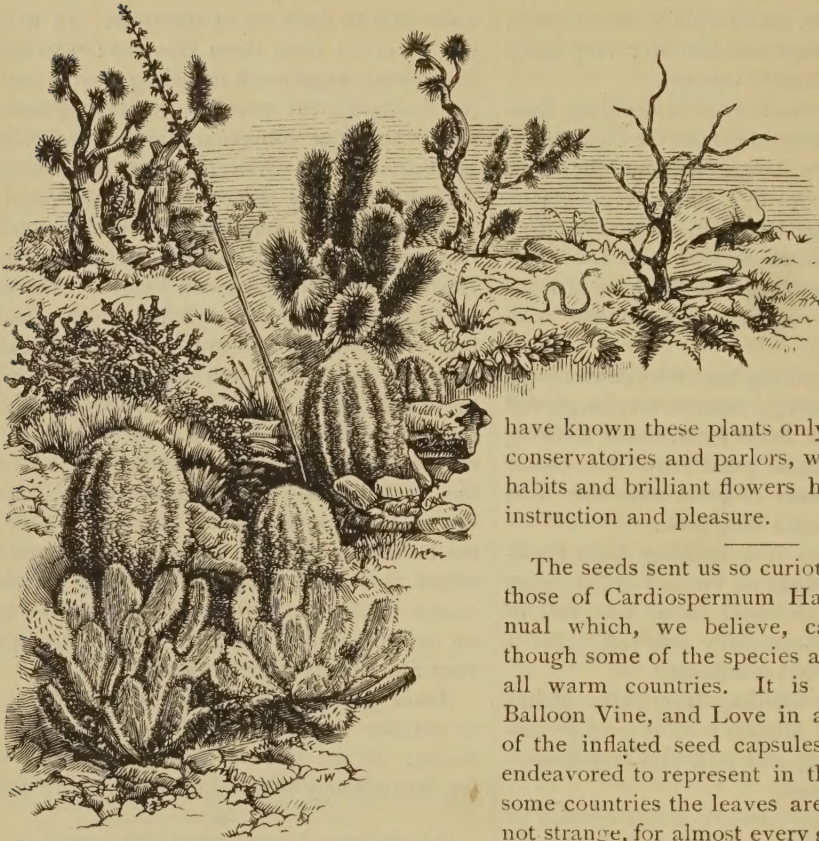
Trees may be baled from the time leaves fall in autumn until spring, when the wood is not frozen. If the buds swell any time in the winter, the crop may be saved by baling immediately.

## INSECTS AND CULTIVATION.

A very important share of garden work for the next month will consist in the destruction of insects, slugs and grubs. The value of any means employed to destroy these pests depends in a great measure upon the promptness and persistence with which they are used. Dilatory or spasmodic efforts will be useless. The greatest advantage one can hold over these little enemies lies in good cultivation; and by this we mean everything that is for the welfare of the crops, the appointment of proper soils and locations, and the application of sufficient fertilizers, timely planting, and thorough cultivation. Healthy and vigorous plants will overcome any injuries that may be received from insects far more quickly than those that are only holding their own and making a struggle for existence against poor soil and poor tillage, which implies weeds and almost always drought to the plants. The numerous methods of repelling and destroying insects that have been published in our pages we trust will be serviceable to our readers, and we shall expect to hear reports of successes or failures, if any; especially should we like to hear from those who may make use of kerosene or coal-oil for the destruction of insects.



## STRANGE SCENERY AND PLANTS.



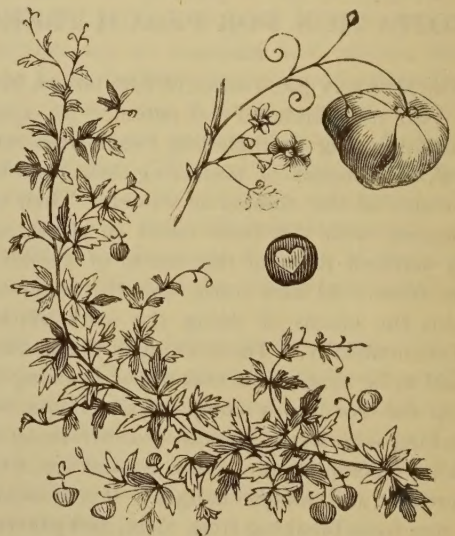
A friend in Utah to whom we are indebted for many favors, lately forwarded us specimens of the Cacti and other plants of the barren plains, thinking some information regarding them would be interesting to our readers, as we are sure it will be; for those who have not visited strange countries, scaled mountain heights, descended fearful canyons, traversed sandy deserts, and stood in surprise and awe at the wonders of tropical vegetation, cannot realize the indescribable and unnameable sensations that the traveler feels, as he first stands face to face with the new and strange and wonderful in nature. And yet we must say that he who has his home in the Genesee Valley, or the Valley of the Connecticut, or almost anywhere on the rolling hills, or in the grassy vales, among the Maples and Beeches, and White-woods and Elms, and Oaks and Hickories, need pine for no more beautiful scenery, for it is not to be found. There is grace, beauty and diversity in such scenery nowhere else equaled.

We did not, however, design to write an essay on scenery, but to give the accompanying sketch, from a photograph sent us by a friend, of scenery south of St. George, Utah, so we set our artists to work to make a *fac simile* of the photograph, all but the serpent, which was

added by our engraver, to give the scene more animation, we suppose. The growth of Cacti, which abounds in some parts of Utah and California, and generally South, is a matter of surprise and wonder to those of us who

have known these plants only as the pets of our conservatories and parlors, where their strange habits and brilliant flowers have afforded both instruction and pleasure.

The seeds sent us so curiously enveloped are those of *Cardiospermum Halicacabum*, an annual which, we believe, came from India, though some of the species are found in almost all warm countries. It is sometimes called Balloon Vine, and Love in a Puff, on account of the inflated seed capsules on it, which we endeavored to represent in the engraving. In some countries the leaves are eaten, but that is not strange, for almost every green leaf is eaten by some people or another. We have seen the Indians of California feast on Lupin shoots as though it was the greatest luxury. This plant is a little tender for northern gardens, unless in



a quite sheltered position, but does well in the house. The engraving shows a strong branch with fruit and foliage, and a small piece with flowers and seed envelope; also a seed, which is black, except the white harp-shaped mark on its surface.





#### A SMALL WATER PLANT.

MR. VICK:—It seems that with your enterprising propensity for utilizing whatever comes within the pale of your especial field, you actually had the daring to publish my private letter relating to Golden Thread, and headed the same with that odious word, Dodder. As if I should ever call my beautiful parasite by any such name! Never!

And, added to this, was the insinuation that it could even become a pest, embodied in the quiet assertion, "Our farmers are too well acquainted with it." How can such a beautiful growth ever be out of place, except in the same sense that salt seems a nuisance if you get it on your Strawberries instead of white sugar; or sugar a grand hoax if put on your beefsteak instead of salt?

What a damper to botanical research, if the result of mine make me regret that I did not content myself with my first suspicion—that the fairies came each night and spun the beautiful threads, until they formed a canopy thick enough to screen themselves under during the day. What with the shock I had received about my waterfall, and now this experience with my parasite, my place is for sale. I have advertised it.

And now having rallied sufficiently to hold my pen, I will mention another experience, and see what you make out of that. Having for years kept a lot of Arrow-head plants in a small tub of water, with a thin layer of mud below, and finally changing locality and leaving them behind, when a friend said, "We want you to join us in a picnic to-morrow to the lake shore"—Lake Erie—of course, I was ready; and thinking at once of the Arrow-head plants growing in the sedges of the low lying shore at that point, I took a pail to bear away with me those and any other treasures that might be coveted. While gathering my water plants, I noticed a thin layer of green, vegetable substance floating on the surface of the water in large patches. It proved to be composed of distinct and separate parts, round, and thin as

fish-scales, each little scale having white, hairy-like threads underneath, which were evidently its substitute for roots, making each tiny bit a complete plant in itself; and yet, by attraction, they clung together in the water, appearing like one unbroken mass of green. "Frog spawn," said somebody. But the Arrow plants and I knew better! Some of them were soon floating in the pail, and the little plants sticking to my wet hands impelled the suggestion that these were certainly fair specimens of the very beginnings of vegetable growth.

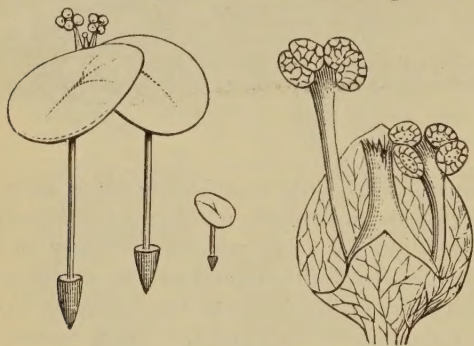
I thought of Darwin, and told my Arrow plants, confidentially, that it must have been a very, very long period since their progenitors, by any possibility, could have resembled in the least such insignificant germs. There was evidently a sensation. Their arrowy leaves bobbed about in a tumult; but as they had no bows with them, I was not afraid. But, was it imagination, or did there really issue from that pail a taunting word that sounded very much like, "Monkey!" As if such a superb creature as a woman could ever have—*it's too much!*

The transfer of the Arrow-heads scarcely checked their growth; they thrived beautifully. But I finally observed that the small cluster of floating scales which had been deposited in the tub seemed to increase. But how—in the name of wonder—could such a process be effected? There were no off-shoots, no anything, to make it seem possible for them to duplicate themselves. I must be mistaken. But no; day by day there was certainly a visible increase. So I placed a small cluster in a glass dish of water, and set it on my work table, where I could watch the mystery. I soon found that the most mature ones, thin as they were, would split apart at the edges, and from out the fissure would issue by degrees another scale, which soon attained the size of the others. I soon discovered, too, that some of them, having evidently accomplished the end and aim of existence, turned brown and sank to the bottom. While planning to take a solitary one of the newly-formed ones, and place it where I could ob-



serve how many repetitions there would be of itself before extinction, some more ponderous matters interfered, and my little flotilla of vegetable protoplasms came to grief.

I had found something else developing in the tub of lake water, less simple in formation than the others, also prettier and suggesting—one an

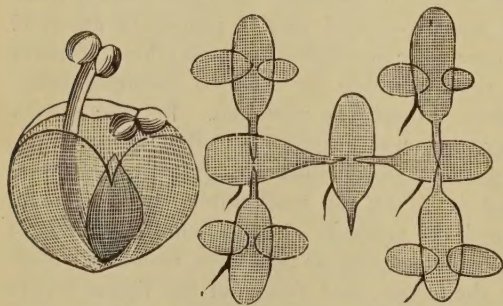


LEMNA MINOR.

outcome of mossy formation, perhaps; the other more flat and ferny—and each particle of both kinds distinct and perfect in itself, and, like the others, with no perceptible mode of propagation. As this discovery was made, and these, too, were about to be removed for special observation, they were necessarily lost sight of.

Now, who can give me a further history of this sort of growth? When in winter the water where it thrives is one mass of ice, where and in what form are the germs preserved for the next summer's development? What other form, if any, of vegetable growth propagates its kind by expulsion from its own body of a fully developed and complete duplicate of itself? Who will enlighten us?—MRS. M. B. B., *Retreat, Bellbrook, O.*

We are sure our readers will bear us out in publishing the account of the Dodder, and it won't do for people writing interesting letters to editors to complain of seeing themselves in print; they should expect as much. The resolution of selling the place we think should be



LEMNA TRISULCA.

reconsidered; while the results of ownership are as satisfactory as apparently they are in this case, the propriety of any change is doubtful. Perhaps the correspondence from this source, in time, may resemble the renowned WHITE's *Selborne*, or SMEE's *My Garden*, and so "The Retreat" will become famous. We hope so.

The little plants our friend describes are what is known

as Duck-meat, or, botanically, *Lemna*, and, surely enough, the comparison of them to fish-scales is just the most appropriate that could be made, for this word, *Lemna*, is said to be derived from the Greek word *lepis*, a scale.

The illustrations convey an idea of the appearance of some of these little plants magnified, together with their magnified flowers. Each little leaf, or frond, has a single white root from its under side, pendant in the water. There is one kind having several roots, but they are black; those described by our correspondent are white, and probably are *L. minor*. They commonly grow in still ponds, or very sluggish streams and ditches. The flowers, which are very minute, are borne in a cleft of the leaf, a staminate and a pistillate flower on the same plant. Our engravings present the staminate flower only; each flower has two stamens. The pistillate flower consists of a sessile ovary. The little plant shown at the right of the two large ones is about the natural size of a frond of *Lemna minor*, perhaps a little overdrawn. The leaves, or fronds, as they are called, emit from a slit, or fissure, young fronds that at length develop a root, and become independent plants. To discover the minute flowers of these plants will require a good lens and a great amount of patience, for it is often necessary to spend a long time before a flowering plant is discovered. When cold weather comes on, the plants sink to the bottom of the water, and lie on the mud, where it is supposed they pass through some change, and young plants come to the surface when the mild weather comes again.

#### WEATHER IN NEW MEXICO.

MR. VICK:—We had a severe drought last year, and a worse one this season. As we have no water for irrigation, no one has put in Wheat, Corn or vegetables this year. I have had to plant all my garden twice, as flies, fleas and grasshoppers have eaten all, except what the frost killed. I am planting now, May 30th, as fast as possible, but expect the hoppers will get them all, as we have millions of them. Sheep and cattle are dying here for want of feed and water. It is a blessing the railroad has reached us; if it had not there would be great distress here this summer and fall. I see by New York papers they are trying to get up an emigration scheme for whites and blacks to New Mexico for agricultural purposes. God help whites or blacks coming here for that purpose, as I fear they will surely starve to death inside of one year, unless they can bring \$1,000 each with them. The people laugh at me for trying to make a garden this year, but I will not give up the ship until she sinks. I hope yet that the hoppers may leave here soon, as they generally do in June. Last year I planted ten acres of Corn, and sold Corn and fodder all for one cord of wood, or \$5.00, while it cost me for planting seed, working on ditch for water, and hoeing, \$38.00. There will be plenty of fruit this year, if it only rains. We have had only one little rain since the 25th of last August. Our mines here are splendid, but we need capital to work them.—G. C., *Santa Fe, New Mexico.*



## SOME GARDEN EXPEDIENTS.

I am an old amateur gardener, of sixty years practice; more for test, experiment, recreation and health, than for profit. I have this to say about the VICK MAGAZINE, that it is always full of useful hints and directions even to an old stager, and the amount of real civilizing and satisfying good that it is capable of doing, in all its round of circulation, is altogether incalculable.

One of the pleasures of horticulture is that of exchange—exchange of roots, seeds, slips, bulbs, methods, &c. I want to indulge in this habit, which is second to nature, by giving some account of expedients which I have lately found very useful, as a sort of return for good received.

In chill weather, it is common to slip a newspaper between tender plants and the glass, to preserve the plants from too great a loss of warmth by radiation through the night when none is radiated toward them from the sky, and the artificial warmth below them is liable to decline. I used, last winter, some empty paper meal sacks, which I stretched open and flat by making a "T" of lath, with the head just as long as the sack is wide in its bottom, and the body lath four or five inches longer than the sack, so as to project enough for a handle. A piece like the head is fastened across this body lath at the mouth of the sack, and then half a dozen small paper tacks are used to keep the sack in place on the frame. Being double,



**Paper Frame.** and of thick paper, with an interspace of still air, these paper frames are excellent non-conductors, and they are so easily placed, or taken down, or hung away, that a large area can soon be covered with them, indoors or out. I support them near the rafters by merely slip-

ping them to about one-third of their length, between the rafters and a light cross-rod fixed an inch below them. I use the same kind of paper in making cheap and handy "hand-lights," or substitutes for glass "cloches," to protect cuttings and newly set plants from drying winds and pinching cold. I cut a thin board of Pine, or tin, or other wood, into triangles, for end pieces, as shown in the accompanying sketch, two of the smaller making one of the larger, so that no material is lost but a little sawdust. The size of a hand-light is that of the length of a pane of glass—what I use is a 10x12. Besides the board, I have a two-and-a-half inch strip of scantling, ripped through diagonally, so as to make two triangular strips. These are cut in lengths a little less than the width of the glass—in my case, nine and three-quarter inches. The lights are then

soon made by tacking these parts—three strips and two triangles—together. If handles are desired, a flour-barrel hoop, soaked in water for awhile, serves for two. I have some lights



END PIECES.

with both sides of glass, but most with one side of paper. With these I can give full south light, or north twilight, and the protection from wind is as good, and the check to radiation, too. It is easy to fasten a paper, tent-like, over the whole, if there is, on any evening, apparent danger of so much loss of warmth as to amount to frost. The handles are a convenience in manipulating, but they prevent compact "nesting" of the lights while out of use. The wood should be painted, or soaked with crude petroleum of the lighter sort, to make it long-enduring. I should mention that the glass is fastened in place by wide carpet staples, one across each corner, or merely at the bottom and a button at the top.

I once had some cocoa fibre, which I used very successfully for growing cuttings in. While looking about me this spring for something of the kind in which to start a batch of some favorite Coleus, Verbenas, and other such soft-wooded plants, my eye fell upon some dry and crisp-looking Moss. I filled a pan with it, put it into the stove oven, took it out in the morning, and found that, with a little rubbing, it fell into fibrous bits, just like the dust of cocoa fibre. I packed some flats with it, covered the surface with some washed sand, and set the cuttings in it, some in a greenhouse where the air was humid, and some in a window, covered with a pane of glass to preserve humid air about their leaves. They rooted admirably, the Moss preserving moisture while admitting moist air, and I never had as good success on such easy terms. When I came to pot off these cuttings, there were so many that I ran out of pots.



Hand-Light.

This time I bethought me of a lot of tin collars, made from old fruit-cans, each about two and a half inches in diameter, and the same length, a quart can making four. These not being wanted until the Celery has been planted, unless a few are used earlier for Strawberry layering, I put a layer of dried and broken cow droppings and charcoal in the bottom of a flat—a shallow, light box—set these tin collars on it as close as they could be placed, filled each half-full of nice, damp, well-mixed



potting soil, and then potted into them. It proved a convenient and expeditious mode, both for the potting and the subsequent planting out; and I set quite a value upon the old, thrown-aside fruit-cans, and on the collars so easily made from them.

It is not in the most genial climates that horticultural art flourishes most. The best and the most successful gardeners are found under the austere skies of northern and elevated regions, where every attainment costs a struggle, and where both wit and will are stimulated to exertion. There are some *contretemps* that no exertion can overcome, nor any forethought or skill can obviate; but what is inevitable is borne uncomplainingly, and what can't be cured is quietly endured. Such is the blackened fruit and wilted shoots seen all around us here among the Alleghenies of Central Pennsylvania this morning, May 15, excepting where walls or other slight shelter prevented the excessive loss of warmth. In 1879, our Grapes, Plums, Cherries, &c., were taken in the same way, May 13; and in 1878, on the 23d of May. Before these three successive years of disaster, we had Grapes regularly and in abundance ever since Grapes became an item of garden stock in our region, say twenty-five or thirty years. These three springs of '78, '79 and '80 were unusually bland, genial and full of promise, until suddenly the Arctic wave came, and with one fell swoop blasted the fair prospect. I had gone over my vines, enjoying their aspect of vigor and fertility, it being much beyond what was hoped for after the late and imperfect growth of the previous summer. I had given them a preliminary pinching of proud shoots, and superfluous bunches, but now every shoot is pinched to the base—every leaf and thyrse destroyed on all exposed vines, the hardy Clinton suffering even more than some of the sorts of less hardness of wood. It is remarkable as one of the compensations of Providence that the trees and vines of more southern isotherms have greater power of resistance in the leaf than northern plants which can endure so much when wrapped up for winter and sealed with the varnish of their waxen epiderm.—W.

**A FLORIFEROUS PANSY.**—Mrs. J. P. B. speaks of her Pansies in the January number of the MAGAZINE. My daughter has counted the bloom on one plant that had no protection this winter, except some brush and plenty of litter from the stable. It has already—May 14th—opened one hundred and twenty-five flowers. It began to bloom in April. It is a purple with yellow center.—MRS. S. F. R., *Clintonville, Maryland.*

#### VARIEGATED THYME.

I would like to call the attention of the readers of the MAGAZINE to the Variegated Thyme as a pretty pot-plant, and excellent for baskets and vases. It has all the pleasant fragrance of the Common Thyme, and the little oval leaves are margined with a light yellow or straw-color. I have commenced to use it this season as an edging or bordering plant. It makes an elegant border and, as it is said to be quite hardy, I anticipate it will prove quite valuable in the garden. If we could have a good variety of hardy plants, suitable for edging, serving the purpose like *Pyrethrum aureum*, it would be of great advantage to the cause of



neat gardening. As yet, this plant has been but little noticed, but I have been much pleased with it and, if it should prove quite reliable as an edging plant, it will be much sought after. Then the Thyme has such pleasant associations, and is so good a bee-plant, it has unusual attractions. We noticed last year that a correspondent called attention to Burnet as an edging plant, and this reminds me of something Lord BACON wrote: "Those flowers which perfume the air most delightfully, not passed by as the rest, but being trodden upon and crushed, are three, that is, Burnet, Wild Thyme, and Water-mints; therefore, you are to set whole alleys of them to have the pleasure when you walk or tread."—A. G., *Albany, N. Y.*

**TRIMMING EVERGREENS.**—I do not much like to trim my Spruces, Firs and Pines, and never do so unless I think the tree is growing proportionately too tall. In that case, after the first growth of spring has been made, and the buds are developed and the wood a little hard, I shorten in the leaders. That is all.—J. H.



## THE FIRST SUMMER BOUQUET.

MR. VICK:—To one whom I owe so much, I thought it well to send my first summer bouquet. Eight years since, I commenced not only to love, but to cultivate flowers. It was then, for the first time, that, beginning a new phase of life, fortune favored me so much that I found with delight I had a little garden spot; and though it was little, and some might have

read from one of your books some advice to beginners, which somewhat cooled my ardor, but proved very beneficial, and was no doubt the cause of my success. "Don't attempt too much at first; grow a few simple things, of the easiest culture, and grow them well. A few Asters, or Balsams, or Stocks, if well grown, will afford great pleasure; but a score of things, half cared for, will be a source of vexation and



thought unfavorable in other respects, to me it was all that could be desired—all that heart could ask or wish. I felt as though I wanted everything pretty that ever grew, and some handsome things that no one else had in our neighborhood. My husband, however, who I then, of course, thought to be very wise, for we had been married only a few months, and fortunately have had no cause to change my views,

discouragement." This, if I remember right, was the substance of the advice; so I reluctantly yielded, and invested one dollar in seeds. Rather a modest beginning, but I found it required all my care and skill. I was measurably successful. Two or three things failed, but sufficient succeeded to satisfy my ambition. I thought no one before me ever had flowers so beautiful; certainly none ever grew so inter-



esting to me. I have since gradually enlarged my collection, until it is now pretty large, including many house plants. The bouquet I hope will reach you in good condition; not that you need one, but just to show what one who commences the cultivation of flowers can do in a few years, with a little care. You will find in this Pansies, which have been giving me flowers ever since March; Early Tulips, Narcissus, and Lily of the Valley, about passing out of bloom, after having been the principal charm of our garden for several weeks; one of my early Roses, and a Fern which I obtained in the woods last summer, and which does well in a shady corner, where the sun seldom shines. A few other things which I have added to help make up the bouquet you will readily recognize. I thought that perhaps my little experience might be of some advantage to your readers, as my success has been a great pleasure to me.—A. J. T.

#### GARDENING IN MIDDLE GEORGIA.

MR. VICK:—I have never read in your MAGAZINE anything from this the middle portion of Georgia. A fancy possesses me that you may be pleased to have something penned for its pages.

Seeds from you, both of flowers and vegetables, have been purchased by those living in our little village, and are noted for being sure to come up and true to name. I have a fine *Gladiolus* just opening its handsome spike of bloom, much the finest ever seen in our village, and yet it was a seedling one you sent me for a small sum.

Summer has come, and with it many beautiful plants and flowers. Some of our out-of-door plants would be quite a marvel to those accustomed to seeing them in greenhouses. Our Cape Jessamines, now covered with snowy blooms, never require any protection. Grown in rich ground, they become very large. In the front yard of a cottage, not far from us, are two of these bushes that are higher than the eaves of the house, and one of them would measure at least twelve feet across the top.

In another flower-yard, about two miles distant, is a Tea Olive plant, *Olea fragrans*, thirty years old, with mossy trunk. From spring till late in the fall this tree is covered with the delicious yellow blooms. The Olive is a very desirable plant, beginning to bloom when not more than a foot high, and with us is perfectly hardy. It is an evergreen of a dark green color.

The lady who owns the Olive tree mentioned, has also an Orange tree, which bears fruit of the sweetest kind. She has had it many years, and, until now, has been in a large tub or box,

which in the winter was removed to the house. Now it is so large that the owner has had it planted in the ground, and intends to have a kind of greenhouse built over and around it before another winter.

The many beautiful varieties of wild flowers found in our fields and woods would be very interesting to flower-lovers. I have on the mantel a vase of these flowers, quite as beautiful as many of the cultivated ones. First, the showy Butterfly bloom; then a lovely white, feathery bloom very much like some *Spiræa*; some blooms of the Sensitive Plant, and something very much resembling the Swan River Daisy. But the prettiest of all, to me, is a waxen-looking bloom which grows on a large-leaved plant, with a stem from which exudes a kind of milk when cut, and which has a root something like a Potato. Can you tell me what it is?

But I have already written at such length, that I forbear adding anything more. Sometime, perhaps, if you desire it, I may describe for you more of the beautiful wild flowers and grasses to be found in this section.—E., Georgia.

#### CYPRIPEDIUM ACAULE.

MR. VICK:—While out botanizing a day or two ago, I found this specimen of the Orchid family, and send it to you, hoping a short description may interest the readers of your valuable MAGAZINE. It is sometimes called Stemless Lady's Slipper. It is found in the marshes near here. There is one flower on a stem, of



a rose-purple color, and full of veins. Its leaves are oblong, and it blooms in the latter part of May. The woods and swamps are now beautiful with these flowers, and well repay the trouble of searching.—A. B. S., Canandaigua, N. Y.





## HONEYSUCKLES.

Dear Honeysuckles, types of constancy,  
You fade not when the Rose and Lily fade,  
But brave the autumn blasts courageously,  
And of the winter's frowns are not afraid.  
You give your lovely blossoms till the frost  
Nips them with icy fingers, and your leaves  
Still softly shine when other leaves are lost  
And birds seek shelter 'neath the cottage eaves.

And at the first light step of coming spring,  
'Ere yet the tiny Violet is seen,  
Or starry Daisy, you a welcome bring  
Enwreathed with graceful sprays of glossy green.  
Then in a few short weeks of sun and show'rs,  
The air is laden with your fragrant sighs;  
And in my heart you're shrined, oh, peerless flow'rs!  
Oh, loyal friends, whose true love never dies!

—MADGE ELLIOT.







### MAKING THE MOST OF A GARDEN.

Upon this subject, in the English *Journal of Horticulture*, discourses "A Gloucestershire Parson:" "It is a common circumstance to have a large forest tree 'whose antique root peeps out' upon the lawn or by the gravel path which runs around the small domain. If so, there is no better place to plant some of the small and interesting specimens of those plants which cannot so well be placed in beds. Take, for instance, the hardy *Cypripediums*; the shady side of the root will suit them admirably, and they will nestle comfortably between the gnarled wood if a little peat is placed for their especial behoof."

"Then a little further from the shelter of the root have a small group of the beautiful Fritillary, *F. meleagris*. This plant grows wild in damp meadows when the soil is rich and heavy. It will grow well in grass, and a group of it in flower in April forms a lovely object for those who can appreciate beauty of outline without richness of coloring. The large bells are quaint-looking; "Snake's-heads," the boys call them where they grow wild. There is a white variety, not so common as the purple, but generally found mixed with it in the meadows. It is scarcely so pretty and not quite as early as the purple form. Another plant which is well adapted for such a place is the blue Squill, *Scilla Sibirica*. This comes so early that is quite gone before the Fritillary begins to show itself. It lasts but a short time certainly, but this very fact enhances its beauty in my opinion. It comes up suddenly in February, soon flowers, and in a few weeks is lost sight of altogether; but its lovely dark blue flowers are delightful to behold at such an early season, and they seem to be perfectly hardy. After being once planted they need little attention, and if slugs are troublesome about the flowers, the best protection is to sprinkle a little guano all around them."

"Another plant which will grow well there, and which is not worth cultivating in a border, is the interesting and old-fashioned Grape Hyacinth. This plant has no beauty in its mode of

growth, but its scent is delicious, and is such an old acquaintance with most of us that we are glad to find it in a corner where it can be happy and unmolested by more fashionable and more brilliant companions. The same plant is sometimes called the Plum Hyacinth or the Starch Hyacinth. Another plant, called the Feathered Hyacinth, is much more beautiful, and would probably do also in a similar place. A very favorite spring flower, perhaps the earliest of all—the little low-growing Winter Aconite, will not, according to my experience, adapt itself to life in the grass. It seems to require a loose, open leaf soil, and unless it grows well there is no beauty in it. Moreover, it is so small that it requires massing. I do not mean to disparage this little lowly flower of spring, for it is a great favorite, but everything should have its right place, and Winter Aconites must find some more suitable locality than the grassy knoll under our forest tree."

"In this little grass garden, one thing is specially requisite that it should not have too much of the garden about it. It must not look cultivated, but wild; hence it is important that the different plants round the root should not flower too much together. It is better, if possible, that one should succeed another, so that the interest may be kept up as well as the grass still preserve its original green and velvety texture. And as I have supposed the most to be made of the knoll round the gnarled roots of an old forest tree, it must be remembered that the plants most suitable for such a place are early spring flowers, which come out before the leaves are on the tree above. Deciduous trees are an excellent shelter for many plants which are not absolutely shade-loving, but which get out of the way before the shade comes over them."

We might, in addition, notice as suitable for the same purpose such of our wild plants as *Hepatica triloba*, and the little Spring Beauty, *Claytonia Caroliniana* and *C. Virginica*, and *Erythronium Americanum*, and the Trilliums or Wake Robins, and Solomon's Seal, *Polygonatum* and *Smilacina racemosa*, False Solomon's



Seal; the Bell-worts, too, or Uvularias, with their handsomely formed pendant blossoms would be very attractive, and, of course, we should have the Violets, blue and yellow, and many other wild flowers that would be contented in just such a place.

But this garden with the old tree is only one of a thousand. At any time almost we may find, not a garden, but a spot of ground that might be made such if the owner could only be possessed of the requisite skill to form it. Now it has some peculiarity, and there may be many, that unfits it for the conventional treatment of a garden, and it is given over to disorder and waste. We desire the taste for gardening in this country to exhibit itself in beautifying unsightly places that are constantly in view, and that require unusual skill in their treatment. There is a zest at the sight of such places not occasioned by the garden in its accustomed place, beautiful as it may be. There is something of this spirit already among us, and it is seen in roof-gardens and sometimes, perhaps, though very seldom, by the shanty of the flag-man at a railway crossing; and this is the true spirit of horticulture, a genuine love of nature, and not merely an attempt at display alone.

#### THE FLOWER GARDEN OF THE FUTURE.

The flower garden of the present time seems to be undergoing a slow transition. There is a blending of tender with hardy plants which is most desirable; tender and hardy plants appear only to have rival claims until they are placed side by side, when it is found that the attractions of either are about evenly balanced. Why should not the borders of shrubberies be made very much broader, giving room for dwarf and choice shrubs, with a blending of herbaceous plants? Many herbaceous plants, such as Lilies, Anemones, and Hellebores, like shade, and would be benefited by the shelter and shade of choicer flowering shrubs, such as Berberis, Euonymus, Skimmia, Kerria, Spiræa, &c.

How easy it would be to form shrubberies and wild gardens of the natural undulations if the surface of mother earth were worked up and planted, leaving straight lines and angles to cabinet-makers and astronomers. We have under our eyes some such undulations rich with old masses of Dielytras, Arabis, Narcissi, Pulmonarias, shrubs, and the very model of what a herbaceous wild garden might be, not of our making. We always doubt the taste or utility of the artificial terrace, and the consequent geometrical flower garden, unless the position justifies it from necessity, which is seldom. A house in the country should not be built as if it formed part of a street, but a part of the open

ground on which it is built: the garden to fit also with the natural lie of the ground. No two houses, or gardens either, could then be at all alike, but would then be as varied as nature itself. The artist takes the ugliest tree in the forest for his model, his taste compelling him, simply because it will be nature's tree. We for the same reason might choose the rugged position on which to make the pleasure ground and flower garden. Much money might be saved in terraces, mounds, and earthworks, and attempts at imitations of nature. Any day we see hills and rocks erected on dead flat surfaces; and, on the other hand, the irregular surface when about to be converted into a garden is leveled. It is to be hoped that the gardening of the future will have a place for everything, and everything in its place, whether herbaceous or alpine, succulent or aquatic, shrubs, evergreen and deciduous, and not excluding even the most extreme vagaries of bedding, seeing that all give pleasure, and seeing also that everybody's pleasure cannot be cut on one model.—*The Gardener*.

#### OLD CHINESE PRIMULA PLANTS.

It is a common practice with many, as soon as their Primula plants have done blooming, either to throw them away or set them in some out-of-the-way corner, where they are so much neglected that they are of no further use. Young seedlings are raised to take their place under the impression that they will make better plants the following winter than the old ones, if cultivated until that time. In many cases this is a mistake, as old plants, if given the same attention as seedlings, make much finer specimens, and produce much more bloom—until they are at least two years old—than the best yearlings. In order to suit certain special decorative purposes, we annually grow a number of seedling Primulas in three-inch pots. About this time these are shifted into six-inch pots, and they make fine, free-blooming, most useful plants during the succeeding winter. They bloom much earlier than the seedlings. When the plants become more than two years old, they are rather inclined to get leggy; but any not having this objection may be grown three years or more. Where large numbers of plants are raised from seeds, it often happens that they do not all produce first-class blooms. When they have all bloomed once, the worst should be thrown away, and only the best kept for growing on. Plants which have been growing in six-inch pots may be taken out of them, the ball of soil about the roots reduced, and then re-potted into the same sized pot. Our old Primulas were re-potted some time ago. Since then they have



been kept in a cold frame with the lights over them, and shaded on very bright days; and they are now making many young leaves. Besides this, they are emitting little crowns all round about the old main one, and it is these which will produce so much bloom next autumn and winter, and make the plants appear a great mass of bloom, when seedlings will only be producing a few flower spikes from their single crown. In potting, a little of the best loam obtainable may be used, and this should be freely mixed with a good quantity of decayed manure, silver or river sand, and charcoal or wood ashes. The pots must be well drained, and the soil should be put in very firm about the roots. After this, if the plant should fall to one side, two or three little pins of wood from four inches to six inches long should be placed down through the leaves into the soil close to the stem, so as to steady the head until the stem has become stronger. Any frame with a glass light to it, or other house, will do to start them into growth. As soon as the roots begin to penetrate the new soil, cease shading them altogether, and grow them as much exposed to the sun as possible during the summer, as this is the best way to ensure all soft-wooded plants blooming profusely and well during the dull days of winter.—CAMBRIAN, in *The Garden*.

#### CHINESE WISTARIA AS A STANDARD.

A novelty has been offered to the horticultural public of London this spring in the shape of standard trees of *Wistaria Sinensis*, raised in tubs, having heads five or six feet in diameter and covered with clusters of bloom. The plants were raised in Rouen, France, and sent to London for sale. It requires several years to obtain plants of good size in this style, and as a matter of profit a strict account would no doubt show a balance on the wrong side. In this country, where the *Wistaria* is "at home," it may be raised in tree-shape in the open ground without expense, save the necessary care in pinching in and shaping. "So completely did" the plants offered in London "strike the popular taste, that there was quite a competition to become purchasers of them, and large sums were offered by those anxious to possess them. The general public, unaccustomed to this fine Chinese climber, looked on with wonder at 'Lilacs' of such unwonted size and beauty of color."

TEA-GROWING IN INDIA.—The increase in the production of Tea in India is astonishing. In 1870 it was about 13,000,000 pounds; in 1878, 37,000,000 pounds, and this year the crop is estimated at 70,000,000 pounds.

#### SINGLE AND DOUBLE FLOWERS.

Although we can genuinely admire as much as any one the beauty of some double flowers, yet we do not think the production of double flowers in all cases an improvement. Durability when cut is one of the advantages of double flowers. An English writer says: "Although durability is a very desirable property, and one that, when writing on the subject of flowers for cutting, I have before this urged, still it would be a mistake to attach more importance to it than it deserves, and to lose sight of the fact that single flowers have an elegance about them which double ones are always deficient in. This to me was never more apparent than in looking at the double varieties of *Cineraria* that have recently made their appearance. There is now the manifest mistake being made of ranging under the florist's standard and bringing within the florist's code of properties, every flower that is sought to be improved or altered; indeed, sometimes the alteration lacks the improvement. The day for this has gone by, for if there is one thing more than another now apparent it is the perception and appreciation of simple beauty in natural objects, flowers included, by the majority of people."

#### BUCKBEAN A SUBSTITUTE FOR HOPS.

Buckbean, *Menyanthes trifoliata*, a common inhabitant of our bogs, is used in Germany as a substitute for Hops in beer making. In Sweden it is employed in brewing porter. The leaves are gathered in the spring and dried in the shade, and possess the bitter principle in a greater degree even than the Hops; but it is difficult to understand how it can be obtained, either in sufficient quantities, or at a price low enough to take the place of Hops.



PRODUCTIVE ROSE.—The *Journal of Horticulture* (England) describes a Marechal Neil Rose, planted inside of a greenhouse, two years ago, and covering a space of twenty-four by eight feet, and trained like a vine over the roof, from which seven hundred blossoms had been cut between March 20th and May 1st.

IN MEMORIAM.—Some years since we spent several very pleasant days at the house of Mr. W. H. DUNNETT, of the celebrated seed house of CARTER, DUNNETT & BEALL, in Dedham, Essex, England. The London papers inform us of the death of his eldest son, WILLIAM, in Australia, where he had gone under medical advice.





### TRoubles IN WINDOW GARDENING.

I bought a Cape Jessamine in the fall of 1878, and in the spring of 1879 it had about twenty nice blossoms on it, and it looked fine. I put it in the garden, and let it remain all summer, but it made no growth. In the fall I moved it into the house, and kept it in the same place I did the winter previous, but this spring it has not blossomed, the leaves have nearly all fallen off, and it does not grow a bit. What is the matter, and what shall I do to it to make it grow and blossom?

2. I have three Cyclamens that grew from the seed I sowed last spring. The bulbs are a pretty good size, but the leaves are on very long, spindling stems. What can I do to make them grow compact, and how shall I treat them through the summer?

3. How shall I sow Gloxinia seed so it will germinate? I have tried it several times, but it will not come up?

4. How can I keep lice off Cineraria and Pinks in the house during winter?

5. Can Pansies be made to grow and blossom in the house in the winter, and, if so, how?—S. B. M., *Cortland, Ill.*

The Cape Jessamine cannot be kept along from year to year as an ordinary window plant, and give any satisfactory results. It demands a peculiar treatment, adapted to it, and unless this be given, it should not be expected to thrive or to bloom. During its flowering and growing season, it requires a temperature of 65° to 75°, plenty of water, and a moist atmosphere. These conditions are not difficult to secure when a house, or the greater portion of one, is given up to the cultivation of this plant; but when one has only a single window plant, it becomes a serious question how to serve it. Then, too, we are obliged to enquire why such plants should engage attention in parlor or window gardening, when there are so many others that are suitable. But every one must settle these points for himself.

The facts in relation to the culture of the Gardenia, or Cape Jessamine, are briefly as above-stated, and if the plant in question has been subjected to a high temperature in the house, during the winter, as might be expected from the ordinary manner of keeping our rooms in the cold weather at the north, then it has failed to grow principally from the dryness of the atmosphere, and this condition has been favorable to the production of scale and mealy bug,

with which it may be more or less infested. The most prompt way now to renew it will be to re-pot it in a mixture of good loam and leaf-mold with sand, and to place it either in a greenhouse or frame, where a high temperature can be maintained, together with a humid atmosphere. If the plant should be brought around again into a healthy state, and a good growth induced, it can then be carried along under the same circumstances until it has flowered, or the temperature may be lowered and the plant checked for a time, and then again subjected to a higher temperature and carried forward to blooming.

2. The Cyclamens undoubtedly have been grown in too high a temperature. The proper information in reference to them will be found on page 122 of this volume.

3. Gloxinia seed should be sown early in the spring, or during the month of March. A shallow earthen pan, or wooden box, is best for the purpose. Prepare a soil by mixing loam and leaf-mold in equal quantities, and sift it so as to have it very fine, and then add sand to the amount of one-quarter of the other material and mix all well together. Put plenty of drainage in the box and, if convenient, first place in a layer of fine sphagnum or moss, and then fill in about an inch and a half of prepared soil. Water with a very fine rose to make the surface even, and sow the seeds thinly over the surface; make a very slight covering by sifting over a little of the soil and place the box in a temperature of about 65°. With all fine seeds we like the practice of laying a piece of coarse, loose-textured paper on the surface of the soil to water on, instead of sprinkling directly on the soil, as the water filters through the paper and there is no danger of disturbing the soil. As soon as the little plants appear, give them the full benefit of the light, but screen them from full sunshine during the middle of the day, and be careful not to let them become dry. Give air occasionally to prevent the plants becoming drawn.

4. Tobacco smoke strong enough to kill the



green-fly will injure the foliage of Cinerarias, consequently these plants are not subjected to this operation, but, instead, are usually dipped into a decoction of Tobacco-water about the color of weak Tea. Tobacco, or Tobacco stems, can have some hot water poured upon it and then allowed to stand and soak. The strength of the water can be tested by dipping into it a leaf and observing the effect upon it; if after a short time in the water it appears to change color, it indicates too great strength, and a greater quantity of water must be added until it is weak enough to be harmless to the plants and yet of sufficient strength to kill the insects. Having a vessel of the water of the proper strength, a plant infested with green-fly can be inverted and dipped into it, and thus the insects destroyed. Afterwards the plants should be syringed with clear water. Carnations may be treated in the same way, or they may be fumigated.

5. Strong plants of Pansies transplanted into boxes, or pots, at mid-autumn, can be kept in cold-frames until early in winter, or, with proper protection, all winter. From this stock they can be taken, as they may be wanted, and brought into the house and kept in a low temperature, or about  $50^{\circ}$ , and near the light. They will bloom freely.

#### STREET TREES.

Street trees generally receive pretty rough usage. Will the Elm or Maple do best where it is subject to injury of the bark from horses, and abrasions from brick and paving-stone sidewalks.—W. J.

People seem to think that a tree will bear about as much ill usage as a cast-iron lamp-post. We would never plant a tree where it would be likely to be injured, for a wounded, suffering tree causes us the same feeling as to ride after a crippled, suffering horse. No ornamental tree can be handsome, or afford any pleasure, unless it has an opportunity to develop and reach a state of perfection, as was designed by nature. We will say, however, that the Elm will bear some grief and show it less than the Maple, or almost any other tree we are acquainted with. The Horse-Chestnut was once largely planted in our streets, but no one would think of doing such a thing now, and those we have are mere scare-crows, because they have been chopped and hacked until ruined. Give even the Horse-Chestnut a chance and it will make a beautiful tree. One of the most magnificent avenues we ever beheld was planted with this tree, but it will not bear mutilation. Never allow the bark or trunk of an ornamental tree to become injured, and never touch it with a pruning knife, unless you are quite sure it is absolutely necessary, and when you have made up your mind that it must be done, put away

the knife and saw and wait awhile, and very likely you will be glad you did not take off that limb.

#### WEEDS INSTEAD OF GRASS.

I sowed Grass seed this spring for a lawn. Now I have a crop of weeds. Since rain, I find young Grass coming up. Was I not badly treated in having seeds sent me so full of weeds?—J. T.

Suppose you had planted Potatoes or Corn, don't you think weeds would have come up all over the ground, so as to make hoeing necessary to destroy them—two or three times? In such cases you would not think you had planted weed seeds with the Potatoes. Our soils are full of seeds of weeds. They are hardy, and being in the ground first, are all ready to germinate, and thus they get the start of the Grass. Wait and give the Grass a chance. Some dry day, when the weeds get pretty high, cut them down with the lawn mower. This will give the Grass an advantage, and it will soon run out the weeds, except, perhaps, some Dock or Burdock, that you may have to dig out.

#### PET FLOWERS.

MR. VICK:—I must tell you of my pet flower. Every year I take one to pet to perfection. Now it is a double red Petunia and a single white one. They were little slips last summer. I put them into a small tub that holds about three gallons, and have been nipping the tops every little while, until now there are fifty-six large branches, many small ones, and from two to six buds on every branch. I have just started a Fuchsia to be pinched in until it will be a perfect bush.

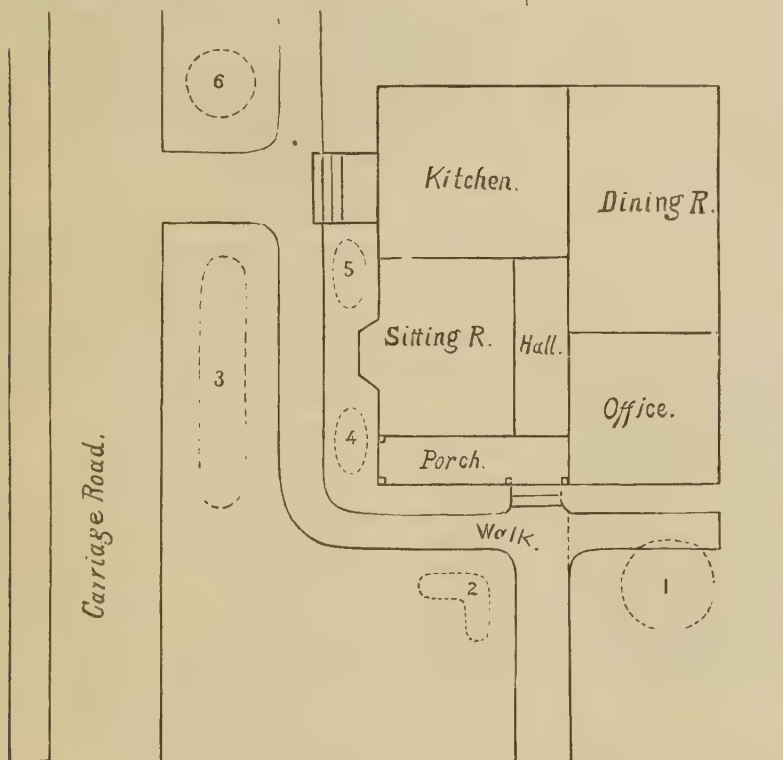
Will *Jasminum officinale* bloom in winter, and would it do to train in a parlor that the frost might touch lightly, and would the English Ivy look well in such a room? I would like two vines to grow in a room that once or twice in a hard winter the frost will enter only a little. Would Hyacinths do with them? There is plenty of light?—Mrs. M. S. P., *Susanville, Cal.*

*Jasminum officinale* would not be satisfactory in the place described for winter blooming. What might do very well, probably, in this room is the *Laurestinus*, and would bloom early in spring. English Ivy would no doubt winter very well there. The variety of climate is so great in the different localities of California, it is impossible to say with much certainty what might result. If, for instance, during the winter the weather should be quite mild for some time, plants in a well-lighted room, to which the sun is freely admitted, would be apt to grow; in this case they would no doubt suffer if frost should touch them. A little care in protection or heating the room when danger of frost is apparent, would save them. A coal-oil stove at such a time would prove of great advantage. Hyacinths and any of the Dutch bulbs could be carried through the cool weather in such a room, and would flower at the commencement of the mild season.



## LAYING OUT A FRONT YARD.

MR. VICK:—I hope it is not out of place in me in asking your advice in regard to laying out our front yard to our new house. I have tried to draw a plan of the yard and first floor of the house, and husband thinks we can have too many flower beds as well as not enough. I wish you would please mark where the flower beds should be. We have not made any beds yet, but laid our walks and sown the Grass seed you sent us, which is coming up, dry as it has been. We have a number of Monthly Roses we intend to set out along each side of the walks; and how will it do to set a Geranium, or some bright-blooming plant, between the Roses? Please



tell me where the flower beds should be for small flowers, such as Pansies, Sweet Alyssum and Phlox. Should the beds be next the house, or in the middle of the Grass plats? If next the house, should the Grass grow between the walks and bay-window. In front of the house the walk is two and a half feet from the house, but on the side where the bay-window is it is five feet. That is on the sunny side and warmest in the winter. The house fronts east, and the bay-window is on the south side. Please mark it down, if not too much trouble, for I want it to look right. I suggested to have Grass between the house and walks, and a small round bed in each plat in front, but husband thinks it better to let the plats be as now, and have the beds next the house.—MRS. R. H. C., *Elmer, N. Y.*

From the information in this enquiry and the sketch sent with it, we have prepared an outline engraving of the yard, showing it as it now is and as it may be changed and finished up as will be suggested. Only one mistake is noticed with reference to the walks, and that is where the walk passes along in front of the office; as this walk leads to no object, it is evidently unnecessary, and should be dug up and seeded

over, continuing the north side of the main entrance walk directly to the steps, as shown by the dotted line. When this is done, there will be an unbroken plat of Grass on the north side of the lot, between the house and the street.

In front of the office, and at least six feet distant from the house, may be placed a circular flower bed, figure 1, about eight feet in diameter. At the turn of the walk at the left is marked a bed, figure 2, conforming in shape somewhat to the lines of the walk; it may be circular,

oval, oblong, or any irregular figure with graceful lines. In the long space, on each side of the bay-window, may be narrow oval beds, two feet or two feet and a half in width, thus leaving a foot or a foot and a half of sod on each side of them between the house and the walk. In this warm spot the double Portulaca would thrive wonderfully well and make a continual blaze of bloom. In the long strip lying between the carriage-way and the walk at the side of the house, we would have a bed about five feet wide and twenty-five feet long. It is in full view from the sitting-

room and, while the beds in front may be occupied with bedding plants, this will have a more permanent character, being the home of Lilies and herbaceous plants and such varieties of Bourbon and other Monthly Roses as will stand through the winter with protection. Many beautiful herbaceous plants come into bloom early in spring long before any flowers can be had from the spring planting. A great diversity, too, may be afforded by the judicious planting of such a bed, and more enjoyment derived from it than from any other part of the flower garden. Another bed, circular in form, might very appropriately be placed, if it is desired, on the west side of the walk, from the carriage-way to the piazza, in front of the kitchen. It will be well enough to plant the Hybrid Perpetual Roses on the lawn, singly and in groups, in convenient places as proposed, not too far from the walks and without any formal arrangement. As the remarks now made cover the ground on



which advice was sought, we do not offer anything in reference to flowering shrubs, a few of which, and a few only, might be introduced with advantage; but the place is small, and the row of Maple trees within the front line of the grounds very materially lessens the capacity of the plat for ornamental planting; voluntarily the opinion is offered that the row of Maples is out of place, and it would have been far better if they had been placed along the outside of the sidewalk next the roadway.

### AN AMATEUR GARDENER'S QUESTIONS.

MR. VICK:—1. In your MAGAZINE for March, 1879, you say that *Clianthus* seed does best planted in sand. Should the sand be dry and kept so? How long should the plant remain in it before transplanting, and when transferred, should it be to a sandy soil?

2. Can soot be employed to advantage, for flowers, with other fertilizers? Is it best to apply it dry, or with water? If dry, how and in what quantities should it be used?

3. Is there any way of hastening the decay of dead leaves, &c.? Can an equally good soil be obtained by burning the leaves and using the ashes?

4. I am told that *Asters* ought to be transplanted at least twice. How are they benefited by the process?—K. S. R., *New York City*.

1. It is best not to transplant the *Clianthus*, but to raise it where the seed is planted, in a bed of sandy soil. Of course, the soil needs proper moisture; if not received as rain it should be applied by hand.

2. Soot is one of the best of fertilizers, and the attention of our readers has frequently been called to it. One pound of soot is enough for one hundred square feet of ground, but it may be used at twice this rate. For plants in pots take a pound or two of soot and tie it in a cloth, or bag, and suspend it in a tub of water, and let it soak until the water becomes of the color of strong tea; give the plants a watering with it about once a week.

3. It is better not to attempt to hasten the decay of dead leaves, except by placing them in a pile and keeping them constantly moist. Lime would quicken the work of decomposition, but it would drive off all the ammonia and the remaining mass would be no better than if the leaves had been burned with fire—of the value of about so much wood ashes. As a material for plant-growing it would be comparatively worthless.

4. All plants that are to be transplanted for their final growth are the better for having a mass of fine roots. It is assumed that this transplanting is done when there is sufficient time for them to arrive at perfection; all the work with them previous to their last move is preparatory to this act, and if, when this is performed, the plants are strong and stocky, and supplied with numerous roots, it is just what is

needed. Previous transplanting, or shifting, as it is termed in garden's phrase, secures the desired conditions.

### GARDEN SLUGS.

MR. VICK:—I am led through the generous way you answer all questions in your valuable MAGAZINE, to ask what is best to destroy garden slugs. My garden is infested with them. For the last two weeks we have had several heavy showers, and they seem to accumulate faster than I can destroy them. They are a species of snail, only smaller, about half an inch long, and leave a slimy mark on the ground after them. You will greatly oblige by answering this in the July MAGAZINE, for I am afraid I shall have no flowers left if they continue at the rate they are going.—J. H. D., *Toronto*.

Trapping slugs with bran proves to be the most efficient method yet tried. If any of our readers know of anything better, we should be pleased to hear from them. Bran will attract more than any other bait we have heard of; it is superior to Cabbage or Lettuce leaves, sliced Potatoes or Apples, or fat, each of which is considered good bait. On page 79 of this volume will be found an account of the way of operating with bran. Lime has been a favorite agent in the destruction of slugs, but those having tried both lime and bran give preference to the latter. In using lime, a dressing of powdered quick-lime is applied to the surface of the soil at the rate of four hundred or five hundred pounds to the acre. This operation will kill many slugs, but its effects are soon gone, and then the slugs come trooping in from the adjacent ground. The effect of the lime is most lasting in dry weather, but in the spring and early summer that is not to be depended upon. Persistent bran trapping will keep them under.

### FINE SPECIMENS OF LILIES.

MR. VICK:—We are taking your splendid MAGAZINE this year, and as so many people find out from it what their plants are that they don't know, we thought we would send you three kinds that we have had a long time and never knew what they were. The Lily was always called Lemon Lily, but the others we never knew any names for. I send them by to-day's mail. Now I must tell you of our *Lilium lancifolium album*, which we bought of you five or six years ago. Last year it had over two hundred blossoms on it. One stalk alone had on forty-five buds, but six blasted. It was beautiful with thirty-nine blossoms all at once. It was broken off in a storm when in full bloom, and filled a vase alone. We also have a very fine *Lilium lancifolium rubrum*, which has frequently had one hundred and fifty and one hundred and seventy-five blossoms, but no such mammoth stalk as the white. If you will tell in the MAGAZINE the names of the plants I send, you will greatly oblige.—Mrs. D. W., *Batchelerville, N. Y.*

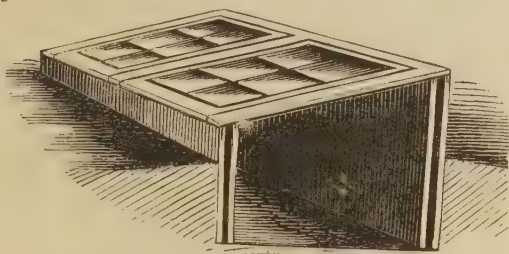
The plant called Lemon Lily is *Hemerocallis flava*, or Yellow Day Lily. The one with racemes of blue flowers is a *Veronica*, and the one with the blue flowers clustered together in a head, *Campanula glomerata*, or Clustered Bellflower.



## COLD PIT.

MR. JAMES VICK:—I have taken your MAGAZINE since you began it, and am well pleased with it. I would like you to give us a good plan for making a pit for flowers through the winter, if it would not be too much trouble.—J. I. L., *Marietta, O.*

A pit for preserving plants through the winter should be situated in as sheltered a position as possible, and have thorough drainage. With



SHALLOW COLD-PIT.

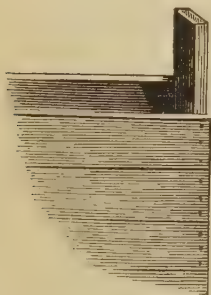
reference to these two points too much care cannot be exercised, and if there is no convenient sheltered spot where the pit can be placed, we would provide shelter by erecting a tight-board fence, or screen, at the back of the pit in the direction of the prevailing winds of the locality; if possible, it is better to place it near some building where the winds are effectually cut off.

As to drainage, it is absolutely essential that it should be perfect. With the low temperature of a pit in winter, and water standing in the bottom, plants would speedily be ruined.

A pit may be not more than four feet deep, and be reached from the top or outside when the sash is removed; or it may be from six to eight feet in depth, and of a size to suit the number of plants to be kept. If built on the side of the house it may adjoin the cellar. A very excellent design for a pit of this kind will be found described and illustrated on page 75

of our last volume. The walls may be built in the same manner and of the same material as the cellar wall; but as dampness is the great enemy of such a place, this trouble may be obviated by building a double or hollow brick wall. When it is not convenient to build a stone

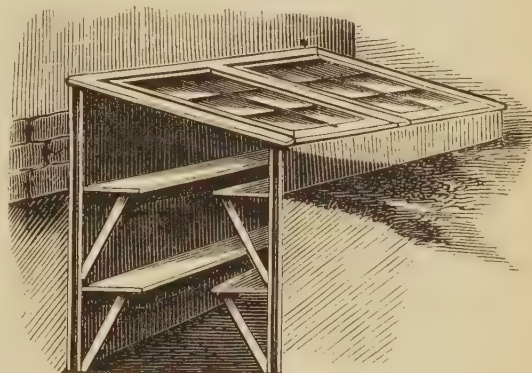
or brick wall, or where lumber is cheap or easily to be obtained, the walls may be built by taking pieces of two-by-four studding and nailing to them on each side rough boards, so as to form a double wall of boards with an air chamber, as shown in the illustration of a section of pit wall. These walls may then be slipped into their places at the sides and ends of the pit, and fastened together. The front wall should not rise over six inches above



Section of Pit Wall.

the surface of the ground, and the rear wall only enough higher to give the sash sufficient slope to carry off the water easily. The back side can be banked up with earth within a few inches of the upper edge. A pit of small size may be made not more than six feet in width and six, nine or twelve feet in length, and it may then be covered with common hot-bed sash, which are usually made about three feet by six feet; if of larger size, the glass covering may be a span roof, if desired, and be made stationary or with moveable sash, at one's option. Close-fitting wooden shutters, in pieces of about one foot in width each, should be provided, so that with straw mats efficient protection can be given at night and during extremely cold weather.

In such a pit some of the more hardy of the greenhouse plants may be successfully wintered. Hot-house and succulent plants would, of course,



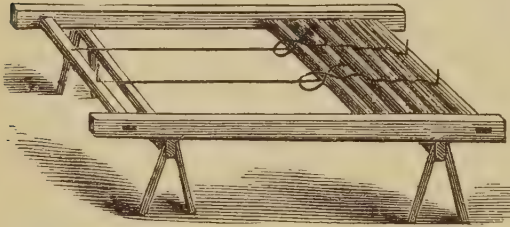
DEEP COLD-PIT.

require to be kept in a higher temperature, and any attempt to winter them in such a place would certainly result in failure, north of the latitude of New York city. Such soft-wooded plants as Verbenas and Heliotropes are so apt to mildew that we would not recommend the cold-pit for them.

The following list includes some popular and well-known sorts, which may be wintered perfectly in this manner:—Abutilon, Bouvardia, Camellia, Carnation, Cestrum, Cape Myrtle, Erica, Fuchsia, Geraniums, Hydrangea, Lantana, Laurestinus, Laurus, Oleander, Pittosporum, Pomegranate, Roses of all kinds, Tritoma uvaria, Yucca.

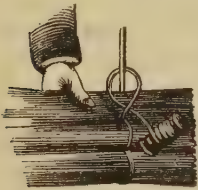
The straw mats to which we have referred for covering the pit, are also very useful articles for the gardener in shading his forcing frames or protecting them from the cold in nights of early spring. These mats are easily made, and one can employ his time upon them in very cold or stormy weather, when nothing can be done to advantage outside. In order to make a good article, and to work to advantage, it is best to

employ a frame. This frame may be made of two pieces of two-by-four stuff for the sides, of the length required for the mat, and of two transverse pieces morticed into them at the ends. Four feet will be found a very convenient width for the frame. This frame-work can rest upon a pair of wooden horses, about two feet in



FRAME FOR STRAW MAT MAKING.

height, in which position the labor can be most easily performed. In the engraving we have shown only two strings, but a mat of four feet width should have at least four strings, which will make the spaces between them about nine and one-half inches in width; closer tying than this even would be preferable. Screws are inserted at the proper distances on the cross pieces, to which the strings are attached. The straw is placed on the strings so as to have all the butts or lower ends come against the sides of the frame, with the tops meeting in the middle, and so thick as to have the mat not more than three-quarters of an inch in thickness when finished. The stitches should not be more than three-fourths of an inch in width. The tying



Tying a Mat.

string should be wound on a reel, and there should be one of them for each stationary string. The method of tying is shown in the illustration. Take a little of the straw with the left hand and work the reel with the right, first over the straw and then under the stationary string, bringing it back between the two strings, pulling tightly and pressing the straw so as to have a flat stitch. In this way the work is continued until the mat is finished.

**Proserpine Tulip.**—MR. JAMES VICK:—Among my early Tulips, the Proserpine has this year three perfect flowers on one stalk. Is it the habit of this variety? I have never seen the same before, and many friends who have seen it think it a freak of nature.—MRR. J. N., *Richmond Hill, Ont.*

The feature here described is occasionally seen in a bed of Tulips, and some varieties are more apt to present it than others. The Proserpine is most frequently given to this surprise. The endless variation of plants is a constant source of pleasure.

## THE LEGEND OF THE MOSS ROSE.



The angel, whose sweet duty 'tis  
To wait upon the flowers,  
One day, weary with the task,  
Reposed in Rosy bowers.

The lovely Rose, elate with pride,  
Bent low her fragrant head;  
Filled all the air with sweet perfume—  
Fanned him with cooling shade.

Refreshed, at last, the angel woke;  
Beheld the drooping Rose  
Spreading above her lovely arms,  
Blessing with sweet repose.

"What shall I give to thee, fair child?"  
The grateful angel cried;  
"Queen among flowers, already, thou,  
My crown, my joy, my pride!"

Perplexed, he looked upon the Rose,  
Blushing so fair and sweet;  
Then plucked the fine and verdant Moss  
That grew about her feet.

Defly around each opening bud,  
A filmy veil did fold;  
And, loveliest of the loveliest, now  
The Moss Rose we behold.

—F. E. B., *La Cewter, W. T.*

## ROSES.

Let not the drifted snow of Lilies white  
Press my dead heart, but Roses red as flame;  
It will be morning then, the stormy night  
Gone like the discords of some martial strain,  
Heard all too near, in the dim distance sweet  
O, Rose of life! that struggled through the light,  
At last unfolding, beautiful, complete,  
To bud and bloom forever in His sight.

—MRS. HELEN RICH, *Brasher Falls, N. Y.*

## IN THE EAST.

They tell the heart's hushed secret in a Rose,  
And with an unclosed bud lovers reveal  
The passion pure and ardent, that yet glows  
The brighter with all efforts to conceal.

—MRS. H. R.



### OXYURA.

MR. VICK :—Nothing among my new annuals pleased me more last year than the *Oxyura*. I think if you were to call attention to it in the *MAGAZINE* your readers who love flowers would be pleased, perhaps benefited. It is not large and showy, but its form is Daisy-like and the colors very delicate. Now that the ladies are so fond of single flowers, like our wild Daisy, I have no doubt the *Oxyura* will find favor.—E. A.

The *Oxyura chrysanthemoides*, which is the one referred to by our correspondent, is a very pretty, free-flowering, hardy little annual, one of the very many pretty things for which we are indebted to California. The plant is neat in habit, branching, about eighteen inches in height; the flower is Daisy-like, size and form



being very well represented in the engraving. The color is of the most delicate lemon yellow, with a clear white edging. The effect of these two colors is very pretty. The only possible objection to this plant is that it does not continue in flower very long.

### RED RUST ON BLACKBERRY LEAVES.

What is the matter with the Blackberry bush, a leaf of which I enclose? It suffered in the same way last year, and has never blossomed.—MRS. M. E., *Bayonne, New Jersey*.

The rusty red appearance of the backs of these leaves is due to the innumerable spores of a fungus that often infests the Blackberry and the Raspberry, but more especially the latter. We learn from reports from New Jersey that this affection has proved the ruin of some entire Raspberry plantations in that State, and many have been more or less injured by it. Although we have had no particular complaints in this section, we know it prevails more or less, and so it probably does over a great portion of the country. The New Jersey Agricultural Experiment Station recently submitted a specimen of Raspberry affected with the rust to a member of the Camden Microscopical Society, who reported the trouble to be of fungus origin, and

stated that the way to prevent it is to "enrich the ground and cultivate well to cause a strong growth, and if necessary further, apply lime or sulphur to the affected leaves."

The Chairman of the Society further remarked: "In this instance, as in many others, we may see that a weakened or diseased condition offers the opportunity for a fungoid attack, showing by analogy the intimate relations between vegetable and animal life. When our systems are reduced from their normal condition by over-exertion, or by weakened vitality, our bodies are more liable to disease than if the normal condition were maintained. If the growing plant is kept healthy and vigorous, fungoid attacks detrimental to its existence are not to be expected, as the conditions are not offered for them. This healthy condition of vegetable growth can best be had by cultivation, and a supply of good manure in proper season. And here must be sought the remedy in the case of the *Rubus* blight."

This is good advice, and, if followed, will enable cultivators to keep their Raspberry and Blackberry plants free from the rust.

### SEEDLING GERANIUMS.

MR. VICK :—Will you please inform me through your *MAGAZINE* whether it is anything unusual for semi-double Geraniums to reproduce themselves from seed, and are new varieties usually of chance occurrence, or the result of skillful hybridizing? I have had the Double Geranium, Asa Gray, exactly reproduce itself from seed. Can you tell me with whom the Geranium Happy Thought originated.—L. H., *Cowansville, P. Q.*

It is unusual for any variety of Geranium to reproduce itself, and the fact that it has been done in the case of the variety, Asa Gray, is very remarkable. New varieties will be produced from seed, whether there has been any care in fertilizing or not, but the best results are to be expected from skillful crossing. Happy Thought was first sent out by some Cleveland florists, but we do not know who was the originator of it.

### WATER-LILY BASIN.

MRS. H. E. R., of Rome, Ohio, who gave a description of her fish and Water-Lily basin on page 109 of this volume, now, June 14th, writes: "My Water Lily commenced to bloom one week ago. Is not that early? When I took the covering off in the spring the new leaves had started nicely, and the fish were most of them alive." It will be remembered that the covering here referred to was for the protection of the fish, the Lily not needing it. The fish-basin was made in the ground, two feet deep and five feet in diameter. In the fall it was covered for the winter, all but an opening through a stove pipe to admit air to the fish.



SILENE PENDULA RUBERRIMA.

## A STRAY FLOWER.

MR. VICK:—I have a stray flower<sup>f</sup> that has been in my possession a good many years, and have not been able to learn its name; nor have I seen it anywhere else, though I have searched for it in several of the seedsmen's catalogues. It bears an abundance of bright flowers, red in color, as you will see by the specimen. Please give me the name, if you can, and the reason it is not better known. I can hardly say how it came into my possession, but doubtless with other flower seeds many years since.—ELLA M. J.

The specimen sent is the branch of a plant introduced fifteen years since, as a novelty, and for some years after was to be found in the catalogues of the leading seedsmen, and still has a place in some. Like a good many new things, it hardly proved worthy the praise bestowed upon it, though it still has friends. It is somewhat trailing in habit, and the plant is almost covered with single red flowers, as will be seen by the engraving, which we had drawn from a plant in full bloom many years since. When in perfection it is very pretty, but the flowers endure only a few days, and the seed vessels which take their place are not attractive. It is known as *Silene pendula ruberrima*. Other varieties have been introduced, but of no greater merit—at least, none that we have subjected to trial have proved so. A large collection of plants is very interesting to the botanist and florist, and when means and space will permit, we like our friends to try many, particularly the new and promising, things; but when persons have but little means and space, it is best to depend upon a few well tried and really valuable varieties.

## INFLUENCE OF FLOWERS.

Who can estimate the influence of flowers on human character and life? Two incidents will illustrate this influence. A distinguished gentleman, who at the time was Superintendent of Public Schools, and who, by extensive travel, was very fully acquainted with the general state of society in the nation, especially in one of the largest States in the Union, said recently in a public address, "Cultivate flowers. I have observed that those families who cultivate flowers live in peace and love. I have not known quarrels, continuous strifes, which so often curse and blight domestic life, in families where flowers are cultivated." And does not the experience of mankind largely, if not fully, confirm the truth of the observation of the gentleman referred to? We think the importance of the subject would justify a careful examination into it, and let the result of the examination be given to the world. We are sure it would be favorable to the most beneficial influence of flowers on domestic happiness.

The other incident referred to is as follows: A clergyman was sent for to visit a sick and dying man. During the visit the sick man called attention to a bouquet which some friend had sent in, and said, "I love to look at those flowers, for they remind me of that world to which I am going. They point me to those

'Fields beyond the swelling flood  
Stand dressed in living green.'"

The clergyman said that he had never witnessed a death-bed scene with brighter future



prospects and more joyful hopefulness than was presented in connection with that beautiful bouquet.—A.

### TWO PRETTY GRASSES.

MR. EDITOR:—I send you two very nice Grasses; one is an annual, the large, feathery one, for it has grown from seed sown early this spring, and the other was sown more than a year ago, but it gave me nothing but leaves last summer, and it is a wonder it was not destroyed, for I thought it a worthless Grass. This spring it threw up its flower heads, and they look almost like the old Shaking Grass. I would like to know their names, as I shall gather them for winter use, and when people ask me the name of anything I dislike to say, "I don't know."—W. M., *Georgia*.

The feathery head is what is commonly known as the Hare's Tail Grass, but the true name is *Lagurus ovatus*. It is one of the best annual Grasses. The one that looks somewhat like the Shaking Grass (*Briza maxima*) only more



BROMUS.



LAGURUS.

pointed, is a perennial that flowers the second season. It is *Bromus brizæformis*, which means *Briza*-formed *Bromus*. It has elegant hanging ears, and is well adapted for bouquets, either summer or winter. Both are shown in the engraving.

### CARNATION PETER HENDERSON.

The statement having been made that this variety of *Carnation* is nearly valueless for the cut-flower trade, on account of appearing wilted soon after it is cut, an expression of opinion by those who have used it has been asked for. We would say that in our experience there is some truth in the charge, for the petals have a peculiarity of curling and looking a little mussed, and for some purposes are not desirable, but for use in large flower pieces this character is not noticed, and as the plant is so wonderfully productive, and the flowers so large and provided with long stems, we regard it as one of the most valuable white *Carnations* in the trade. Good soil and cultivation, and a little more than ordinary care in handling, is necessary to present these flowers to the best advantage.

### PHLOX SUBULATA AND IRIS.

MR. VICK:—Please answer the following questions through your *MAGAZINE*. Can I purchase seed of *Phlox subulata*, known as Moss Pink, and at what price? I should like to get seed, if possible. How can I get *Iris Iberica*, mentioned in the May number, and at what price? Also, state price of *Iris Tectorum*. I should like to get some of both. Have you any varieties of Garden Peas that are not subject to grubs or bugs? If so, what are they? By answering, you will confer a great favor.—MRS. E. X. H., *Amity, Oregon*.

*Phlox subulata* seed is not offered for sale; the plant is propagated by division of the roots.

The popular taste has not yet fully accepted the *Iris*, consequently but few of the roots are sold, and dealers are not warranted to keep on hand a stock of many varieties of them; only some of the finest and most reliable ones are yet offered in this country. The most showy one of all, we consider *Iris Susiana major*. New varieties will no doubt be offered as soon



IRIS SUSIANA MAJOR.

as the public appear to show an appreciation of these handsome flowers and a desire for them.

### THE CURRANT WORM.

The destructive *Currant worm* has for many years been held in subjection by the use of white hellebore, and although this substance is quick and sure in its operation, and by its use enables one to speedily rid his *Currant* and *Gooseberry* plants of the depredator, yet it is a little difficult in some cases of application—when the worms are working on the lower part of a bush. It is with much satisfaction, therefore, that we learn the announcement of a more convenient and not less certain agent for the same purpose, and this is carbolic acid. Two teaspoonfuls of carbolic acid mixed in three or four gallons of water gives a liquid of proper strength to sprinkle over the bushes. It is said to kill the worms quickly, and, what is more, it is reported to be equally valuable in destroying the *Rose-bug* when applied to *Rose* bushes.

MINNESOTA CLIMATE.—A correspondent, of Stillwater, Minnesota, writes, "I like your *MAGAZINE* very much, and am particularly interested in the Correspondence and Pleasant Gossip departments. You speak of Minnesota as being very cold. Quite true, but house-plants of all kinds are grown in plenty, and the displays at Minneapolis and St. Paul Fairs are grand."

## GOSSIP REVIEW.

MR. VICK—I am much pleased and interested with the MAGAZINE, so much so that I wish to send a copy to a friend. I noticed the article of Mrs. D. C., Louisiana, and think by the description it may be Monk's-hood that grows in Ashby Falls, Mass., not fifty miles from here. If Mrs. D. C. will send me her full address, I will undertake to secure and send her some this summer, so she can see if it is Monk's-hood.

In the April number, I noticed L. M. McL., New York, wrote that a lady gave her, or him, whichever it is, wild flowers gathered in Salisbury, Conn., and as I lived in Salisbury some years myself, and gathered wild flowers from every nook and corner, I could easily believe they were beautiful.

I send you "A Legend of the Fuchsia." I did not compose it, but copied it from my scrap-book, where I pasted it many years ago:

## LEGEND OF THE FUCHSIA.



A legend of this little flower,  
I heard not long ago:  
'Tis this, that when upon the cross  
The sinless Saviour died,  
And the soldier with his cruel spear  
Had pierced his precious side,  
The holy drops flowed to his feet,  
Then fell upon the sod,  
When Mary kneeled and wept for Him,  
Her son, and yet her God.  
An angel, who was hovering near,  
Thus breathed a prayer to heaven:  
"Oh, Father, let them not be lost,  
These drops so freely given,  
But in some form of beauty still  
Let them remain on earth,  
And here upon this rugged hill,  
Give some sweet floweret birth.  
Then, forth from the ensanguined sod,  
A Fuchsia sprang that morn,  
Rich crimson, dyed with Christian blood,  
Wrapped in his "robe of scorn,"  
Drooping in sorrow, still it bows  
Ever its graceful head;  
Shivering in the slightest breeze—  
Trembling in fear and dread;  
For the dark shadow of the cross  
Can ne'er forgotten be,  
Where all the perfume of its breath  
Was spent on Calvary.

Yes, offering its rich fragrance there,  
As incense at His feet,  
The Fuchsia, though so beautiful,  
Can never more be sweet.  
—F. L. B., Pittsfield, Mass.

## CARDIOSPERMUM.

JAMES VICK:—The *Cardiospermum halicacabum* is a curious, half-hardy annual, with singular, but not showy, flowers. It is a plant that is well worthy of more attention than it receives. It is a very pretty and rapid growing climber, very well suited for the decoration of trellises or arbors in the open air during the summer months, where its remarkable seed-pods cannot fail to attract attention. It succeeds best when grown in light, rich soil, and a warm situation. The seed should be sown in a pan of well-drained soil in a hot-bed about April 10th, and as soon as they are strong enough to handle they should be potted off into three-inch pots, using ordinary potting soil; pinch back the points once or twice, if possible, so as to obtain well-branched and strong plants; plant out, when all danger of frost is over, into a place prepared for them by digging the ground to the depth of at least two feet and working in a good portion of well-rotted manure. In a place so prepared the *Cardiospermum* will attain the height of twenty feet, or more, if the situation be warm and the plants strong and healthy when placed outside, and a little attention be given to training. The seed can also be sown in the open air about May 6th, with very fair success. The *Cardiospermum* belongs to the natural order Sapindaceæ, and is commonly called the Balloon Vine, or Love in a Puff, from its remarkable, inflated capsules. It is also called by some the Heart-seed, in allusion to its round seeds, which are marked with a spot like a heart. The *Cardiospermum* is by some recommended as an excellent plant for the greenhouse. I have never tried it for that purpose, as there are so many excellent climbers to choose from, and I am under the impression that, if grown in the greenhouse, it would furnish a good home for the red spider. It is perfectly free from insects when grown outside.—CHARLES E. PARNELL, Queens, L. I.

[The reader will please see page 198 for an engraving of the *Cardiospermum halicacabum*, which, perhaps, had been better given in connection with the above interesting article from a correspondent who has favored our readers with much practical information on the culture of plants. In answering inquiries, however, we find engravings so useful in making subjects plain, that we make use of them on every possible occasion.]



## EXHIBITION FLOWERS.

Several enquiries have been received about the best methods of carrying flowers to the fairs and their arrangement for exhibition.

Many years' experience in carrying cut flowers long distances to shows has convinced us of the superiority of common market baskets for conveying them. We have tried many ways, and been at much expense to carry flowers so as to present them in the best condition, and the market basket has proved itself the most serviceable of all packages. We first place a layer of moss (*sphagnum*) in the bottom of the basket; this moss is only a little damp, for too much moisture is to be feared, causing the flowers to decay. Flowers that can be cut with long stems are bunched together in the hand as they are cut, and without further handling or rearranging are set close together on the layer of moss; thus handful after handful are placed in until the basket is full. Then the baskets are covered with a firm manilla paper that is securely tied down. A piece is cut out on each side of the paper so that it may pass by the handle and tie down snugly; this secures a moist atmosphere for the flowers, the cracks in the basket allowing sufficient air, and yet not enough to dry off the moisture.

It is always best to cut flowers in the morning, or at least before noon, as during the heat of the day they are apt to flag some, and, if cut in this condition, they will continue to present a wilted appearance.

Dahlias should be carefully labelled as they are cut; a wooden label with a wire or string fastened to the stem of each bloom, and then these are set in the moss as thick as they will stand. Pansies are cut and placed in little thumb-pots, partly filled with moss, and moss enough packed around the stems to hold them secure, and then the little pots placed in the moss in the basket. *Gladiolus* spikes are cut by the handful and placed in a basket, setting the cut end of the stems in the moss; named varieties are first correctly labelled. We find no trouble in carrying *Gladiolus* spikes without covering them. Tall spikes of *Tritomas*, or any other kinds of flowers, may be carried in the same way. Close-headed flowers, like *Zinnias* and Dahlias, require more room than loose, open blooms, as, unless they have plenty of air, they are apt to become too damp and fall to pieces when too long on the road. In the way now described we have delivered flowers in fine condition upon the exhibition tables at St. Louis, St. Paul and Omaha. Few of our readers will have occasion to send flowers so far, as exhibitors at State Fairs will rarely be obliged to travel over two hundred, or at most three hundred

miles, and by rail this is so speedily accomplished that the flowers will not suffer, if properly managed. Care should be taken not to let them stand in the sun at stations or elsewhere. The express companies have become so accustomed to the carriage of flowers that they are usually very accommodating and careful, and basket packages of flowers entrusted to them will receive proper handling.

The arrangement of flowers at an exhibition will depend somewhat upon the rules adopted by the society for the regulation of this matter, but in general it will be found that they can be displayed and kept best by inserting their stems in moist sand. Experience has determined that the most practical way to provide for flowers at an exhibition is to make tables of rough boards about three and a half feet wide, and as long as may be needed. All around the edge of the table nail a band or strip of board about three and a half inches wide, thus leaving a space two and a half inches deep to be filled with sand all over the table. After the sand is evenly spread it can be moistened by sprinkling and is then ready to receive the flowers, the stems of which are inserted in it.

Tall flowers and bouquets are placed in vases, or commonly in fruit jars, because they are most easily procured. If green moss from the woods can be procured, nothing will finish a table better than to lay moss all over the sand; it presents a very gratifying appearance.

Sometimes it is found necessary to place a railing about the table to prevent visitors handling the flowers, and if this is covered up with branches or twigs of evergreens, it will conform in style to the moss-covered tables.

## NEBRASKA FLORICULTURE.

I have never seen any communication from Table Rock in the *MAGAZINE*, though we have a greenhouse here, and almost every one keeps a few house plants.

Last summer we had two fine *Tuberoses*, one three and other three and a half feet high. The first had thirty-one and the second thirty-three beautiful double flowers. This may not be anything uncommon to you, but they were the finest I have ever seen. I have found double *Hepaticas* in Iowa, but never counted the petals.

Do Violets need any special petting? I have tried four times unsuccessfully to grow them, and as I feel that I cannot be contented till I do get one to grow, I would like to know how to proceed before I try again.

We raised *Cannas* from seed last year which made a growth of five feet, many of the leaves being twenty-two inches long. The *Zinnias*, from seed which you sent, were the finest in the neighborhood.—E. L., *Table Rock, Nebraska*.

Violets love a little shade, and perhaps the cloudless sky of Nebraska has proved too much for *Viola* in the care of E. L. Try it in the protecting shade of shrub or tree, and keep it supplied with sufficient water, and there is no doubt about its flourishing.

### TUBEROSES AT CEREMONIES IN INDIA.

We have frequently had applications for Tuberoses in a variety of colors, but have never been able to gratify the demand. From the following account it appears that similar ideas are entertained in other countries, but our acquaintance with press reporters is intimate enough to allow us to make a proper allowance for some statements: "In a published letter from India is described the laying of a corner stone at Kolhapur, by Sir RICHARD TEMPLE, Governor of Bombay. The following is an extract: 'After the speech was finished, the Rajah, from a little golden cup and saucer containing oil of sandalwood, with a golden ladle, put a drop of oil on the handkerchiefs of the Governor, Colonel SCHNEIDER, and one or two others. He then sprinkled a little perfume on the handkerchiefs from a silver bottle. Next were brought to him immense garlands of flowers, with which he decorated the Governor and Colonel SCHNEIDER. The Governor's garland was made of Tuberoses and was two inches in diameter, and on being placed around his neck reached down to his waist. The Tuberoses were held together by means of gold thread. There were probably not less than from 1,000 to 1,500 flowers in the garland. The garland of Colonel SCHNEIDER was made of pink and red Tuberoses and was similar to the Governor's. The next operation was the placing of bracelets, made of full-blown Roses, on the wrists of the two worthies named. Next, on golden salvers, the Rajah served them with pan supari (betel-nut and leaf), cloves, mace, almonds, etc., done up in goldleaf. It is usual on such occasions for the guests simply to touch the salver, which is then passed back to the attendants, who carry it away. But the Governor, I believe, took one package of pan supari. After this ceremony the Karubhari went through the same performance with each of the European guests and native chiefs, with the exception that our garlands were not as fine, and the pan supari and spices were served to us on silver salvers. No garlands of Tuberoses were bestowed on the native chiefs. After this, the pan supari and spices were passed around to the natives, but in their cases the morsels were not covered with goldleaf. Bouquets were given to all the guests, and the native chiefs received the oil of sandal and perfumery on their handkerchiefs. One can form an idea of the great quantity of Tuberoses used when I say that in my garland alone there were 150, besides several pink Roses, and there were many in the bouquets, which were bountifully scattered.'"

It is safe to assume that the pink and red

flowers here mentioned as Tuberoses were something else, and our enquirer is, no doubt, of the same opinion, but desires to know the probability of the production of a variety with colored flowers. Careful selection through a number of generations of plants has produced some wonderful results, and we have a right to expect much from it in the future. That a colored Tuberose should ultimately be obtained is, perhaps, not impossible, and the pink tinge the buds have before opening indicates that this result is even probable.

### LILIES AND CAPE JESSAMINE.

MR. VICK:—I write to thank you for the MAGAZINE, always interesting and instructive. Had no idea I was writing to "appear in print" when I described the Lily, nor did I know its size was so uncommon, not having thousands to compare it with, but knowing it exceeded those of my friends, or any of my previous growth. I might have told you its beauty was enhanced by its growing in a cluster of six, two of the other stalks being over three feet high, and having three and two Lilies and another having one.

Let me add, by way of variety, the measure I have taken to-day of my Cape Jessamine, which stands almost three yards high, lacking only a quarter of a yard of being nine feet, and measures around it nine yards, being twenty-seven feet. Last summer there were four hundred blooms at one time. My friends say this is the largest they have seen, though they are numerous here, and one of my neighbors has one looking taller, though not so large around. I do not know its height.

Don't expect to have anything of note from the garden again until Hyacinths bloom, though I have a mind to tell of my Lancifolium, which is in height three feet nine and a half inches. No larger than yours, I guess. Lost the old roots; this is an off-shoot.

The Auratum, now in bloom, has done so much better I will spare you, which will doubtless make you grateful.—A. M. S., *Newbern, North Carolina.*

### PROTECTION AGAINST MOSQUITOES.

As a sure remedy against mosquitoes and other obnoxious insects, the tincture of Persian insect powder has been recommended. The success of the preparation depends upon the way it is applied. The tincture must be prepared with alcohol of full strength, and not diluted. It should be used with an atomizer, and, employed in this manner, it is said that it will effectually rid a room of insects of all kinds in a very short time.





## BOTANY FOR LITTLE FOLKS.

In continuance of the subject of plants called apetalous, or those having only one set of floral envelopes, we here present one that is particularly remarkable on account of a peculiar formation of the leaf in the shape of a hollow vessel to which the name, pitcher, has been given. The *Nepenthes*, or Pitcher plants, are natives of Asia, and of Australia and other islands of the Indian Ocean. They vary greatly in size and form, and many of them are of very graceful forms and beautiful markings; besides the natural species, there are now many hybrid varieties of these plants. The midrib of the leaf of the Pitcher plant is extended at great length beyond the leaf, and at last terminates by an expansion into the part called the pitcher. The



Fig. 1. *Nepenthes gracilis*.

pitcher in all cases is supplied by a cover that lies over the opening while the leaf is young, but as it advances in age the lid gradually rises, and at last remains erect. The flowers of this

plant are quite small, and flowers with stamens are produced on one plant and those with pistils on another; that is, the plants are dioecious, as we learned last month. Our readers will see that the *Nepenthes* is very different from



Fig. 2. *Nepenthes*  
Staminate Flower.

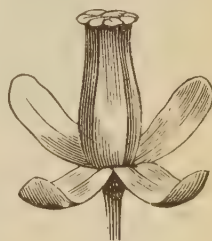


Fig. 3. *Nepenthes*  
Pistillate Flower.

the *Sarracenia*, or Side-saddle flower, which is sometimes called Pitcher plant in this country. The vessel of the *Sarracenia* is the hollow petiole, or leaf stem, and its cover is the true leaf; but in the *Nepenthes* it is the enlargement of the mid-vein or, as some think, the expansion of a gland situated at the apex of the mid-rib. When, however, we consider that a mid-vein is the continuation of a petiole, we perceive that the pitcher either of the *Nepenthes* or of the *Sarracenia* is an enlargement of what is essentially the same organ, although the modification occurs at different parts of it—in one case at its base, and in the other at its apex—but in both at the extremities of the petiole. To give an idea of the great length to which the mid-rib of a Pitcher plant is sometimes extended, we will say that accounts are given of specimens under cultivation whose pitchers were produced twenty-two feet distant from where the plants grew.

The *Nepenthes* plants, in their native localities, inhabit swamps; they have somewhat woody, round stems that either lie on the ground, run over the tops of shrubs, or twine about the trunks of trees. The pitchers always contain more or less pure water, which by some is supposed to be an accumulation of dew, but, far more likely, it is a secretion of the pitcher itself, through some minute glandular scales with

which the lower part of the vessel is lined. What purpose is served by this water can only be conjectured.

Not far from the *Nepenthes*, either in family relationship or in appearance, if we may compare flowers and leaves, is the *Aristolochia*, or, as it is commonly called, the Dutchman's Pipe,



Fig. 4. *Aristolochia Sipho*.

that is a native of our own forests. This is an apetalous plant and, although it may seem far-fetched to liken this tubular, or pipe-shaped, or pitcher-shaped flower to the pitcher of the *Nepenthes*, yet, it will be seen that no violence is done even to scientific accuracy in thus considering them, when we take into account the fact that has already been noticed in former months that a flower in all its parts consists of modified leaves. In one case, the pitcher-form is assumed in close connection with the leaves; in the other, with the essential organs of the flowers.

In conclusion of the view we are taking of a grand natural division of plants, we shall point out a few more of the useful and ornamental plants and trees it contains, and thus furnish our readers some information by which they may continue for themselves a more extended examination.

The beautiful little *Abronia* of three varieties, now much cultivated, is a member of the same family as the Four O'clock. *A. umbellata* and *A. arenaria* are natives of California, and *A. fragrans* is from the Rocky Mountains; the latter is very fragrant as well as pretty, and all of them are much admired. These plants have perfect flowers, that is each one with stamens and pistil. The floral envelope is as delicate and handsomely colored as one could wish, although

in scientific language it is called a calyx. Those old-fashioned flowers that manage, however, to still maintain a place in some gardens, *Lovelies-bleeding*, and the *Cockscomb*, and the *Globe Amaranth*, find here their place in arrangement. How many such plants there are that have descended to us from our early ancestors' gardens, and that, from sturdy inherent qualities, have maintained their hold in our affections and are enshrined in the purest literature of the race! The *Globe Amaranth*, *Gomphrena globosa*, is a plant of great antiquity, and the ancient Greeks and Romans prized it highly, and used it for the highest and most sacred purposes of decoration. With what veneration it is alluded to by MILTON when he describes the ceremonies of the court of Heaven and of the angels says that

"With solemn adoration down they cast  
Their crowns, inwove with Amaranth and gold;  
Immortal Amaranth, a flower which once  
In Paradise, fast by the tree of life,  
Began to bloom; but soon for man's offence  
To Heaven removed, where it first grew, there grows,  
And flowers aloft, shading the fount of life,  
And where the river of bliss through midst of Heaven  
Rolls o'er Elysian flowers her amber stream,  
With those that never fade."

The ideas of immortality and faithfulness are intimately associated with the Amaranth; so is that of virtue.

"Fair emblem art thou of the spotless breast!  
Like thee, unfading flower, shall virtue bloom,  
When youth, with all its bustling pride, repose  
Deep in the tomb!  
When beauty's cheek shall wither like the rose,  
And beauty's sparkling eye shall be at rest."



Fig. 5. *Abronia umbellata*.

*Amaranthus caudatus* has always been intimately associated with the tender sentiment, as its common name indicates. A little poem, written by Mrs. LAWRENCE, describing "Love



Shut Out of the Garden," thus alludes to this old favorite flower:—

"Cruel boy! Abjured and scorned,  
Here thy blushing trophies glow;  
Love-lies-bleeding all around—  
Speed thee! dangerous vagrant; go!"

The Madeira Vine, so much prized in house and window gardening, is properly Boussing-



Fig. 6. *Amaranthus caudatus*.

aultia basselloides. It belongs to the same family as the Beet and the Spinach. The *Achyranthes*, greatly in use as an ornamental-leaved plant, is another member of the apetalous division of plants, and as such we may mention the Laurel, the Sassafras, the Daphne, and many others; but we shall yet only call attention further to the Willow family and some of the Nut-bearing trees. The Willow produces its flowers in long spikes, called catkins. Some of the flowers have only stamens, and some only pistils; all those having stamens form a catkin by themselves, as shown at figure 10, and those having pistils are born together on a catkin, as shown at figure 11. The separate flowers, staminate and pistillate, are shown by figures 12 and 13. These consist merely of the organs, stamen or



Fig. 7. *Celosia*.

pistil, in connection with a little bract. The Willow family embraces the Poplar. The Birch family is very similar to the Willow in arrangement of its flowers. The Willow, under various specific forms, inhabits nearly every part of the globe, but is conspicuously absent from Australia and the Pacific islands. The different species of the Willow vary remarkably

in size and general appearance. One of the handsomest, as an ornamental tree, is the Weeping Willow, *Salix Babylonica*, which is said to



Fig. 8. *Gomphrena globosa*.

be the tree referred to by the Psalmist, when he describes the Israelites, captives in Babylon, mourning for Jerusalem: "By the rivers of Babylon, there we sat down, yea, we wept, when we remembered Zion. We hanged our harps upon the Willows in the midst thereof." This tree is a na-

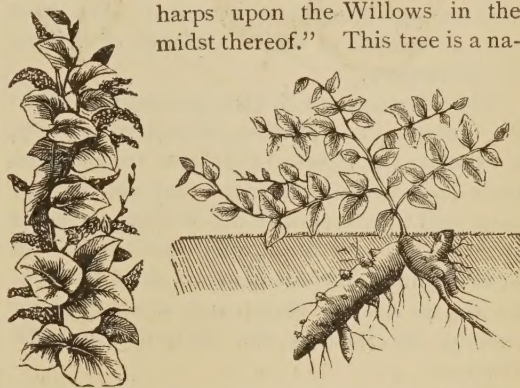


Fig. 9. *Boussingaultia basselloides*.

tive of Turkey, or has been long in cultivation there; it was carried into England in a very strange manner.

"Many years ago the well-known poet, Alexander Pope, who resided at Twickenham, received a basket of Figs as a present, from Turkey. The basket was made of the supple branches of the Weeping Willow, the very same species under which the captive Jews sat when they wept by the waters of Babylon. The poet valued highly the small



Fig. 10. Staminate catkin of Willow.

and tender twigs associated with so much that was interesting, and he untwisted the basket, and planted one of the branches in the ground. It had some tiny buds upon it, and he hoped he



might be able to rear it, as none of this species of Willow was known in England. Happily, the Willow is very quick to take root and grow. Soon the little branch became a tree, and drooped gracefully over the river, in the same manner its race had done over the waters of Babylon. From that branch all the Weeping Willows in



Fig. 11. Pistillate Catkin of Willow. England are descended." From England the Weeping Willow was brought to America. We have quite a number of native varieties of Willow in this country.

The Chestnut, which also produces its flowers, staminate and pistillate, in separate catkins, is illustrated at figures 14, 15 and 16, and from these engravings, and from what has already been said in reference to the Willow, its mode of flowering will be readily understood. In close relationship to the Chestnut stand the Oak, the Beech, and the Hazel, and, at only a slight remove, the Hickory, the Butternut and the Walnut.

Thus, we have now concluded a very meagre survey of some of the more conspicuous plants botanically grouped together in the class of Dicotyledons or Exogens. Under the same head, but, on account of very distinct features, the coniferous trees, the Pines, Spruces, Firs, and some

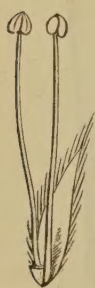


Fig. 12. Willow Staminate Flower.



Fig. 13. Willow Pistillate Flower.

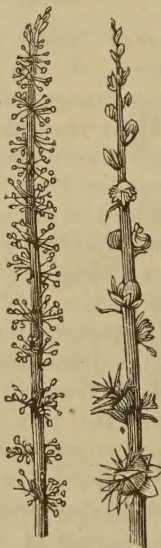


Fig. 14. Staminate and Pistillate Catkins of Chestnut.

tropical trees called Cycas, form a separate and sub-class. The trees commonly known at the north as Evergreens belong to the Pine family,

or Coniferae. For many months we have strolled together through field and forest, by highway and hedge, streamlet and pond; we have been privileged to enter our neighbors' gardens and conservatories; we have culled flowers from

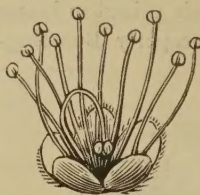


Fig. 15. Chestnut Staminate Flower.

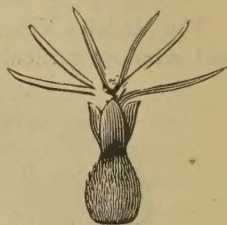


Fig. 16. Chestnut Pistillate Flower.

lowly herb and bush and lordly tree; we have admired their beautiful colors and curious structure and inhaled their various odors; and, yet, before us lies the realm of vegetation scarcely glanced at. Dear reader, shall we continue our monthly rambles?

#### FIFTY CENTS FOR THE LAST HALF YEAR.

MR. VICK:—You will remember I have sent you about twelve subscribers to the MAGAZINE. I know more that should take it, and many more will next year. Will you allow me to offer the last half year for fifty cents?—W. W.

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As a compliment to our readers, and an expression of thanks to those who have labored so earnestly to increase our circulation, which has resulted in a large addition to our subscription list, we shall make our August number larger and handsomer than any previous one. We call it our MIDSUMMER NUMBER. Subscribers wishing to make a present of this number of the MAGAZINE to friends will please send us a postal card with address, and it will be forwarded.

#### PUBLICATIONS RECEIVED.

Success with Small Fruits. By EDWARD P. ROE. New York: DODD, MEAD & Co. Pp. 313. \$5.

This valuable statement of practical experience in the cultivation of small fruits, by E. P. ROE, is issued by DODD, MEAD & Co. in the best style of the bookmaker's arts. It is a reliable contribution to an important department of horticulture, and we hope hereafter to favor our readers with extracts from its pages.







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